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## FREQUENCY AND VOLUME OF DOCTORS' CALLS AMONG MALES AND FEMALES IN 9,000 FAMILIES, BASED ON NATION-WIDE PERIODIC CANVASSES, 1928-31<sup>1</sup>

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Studies of medical care in this country have usually been built around the phenomenon of increasing care with ability to pay. The relationship of medical care to family income is of such paramount importance from a sociological point of view that other relationships have been neglected. For example, the volume of doctors' calls varies with age, sex, and marital status; the variations of this kind are greater for home calls and hospital days than for office calls. Children under 15 years of age are seldom taken to nonmedical practitioners, but above 20 years the use of this type of practitioner increases in frequency, particularly among women, with a peak at 45 to 64 years and a decline thereafter. Or again, the average uncomplicated case of typhoid fever receives 20.1 calls and of pneumonia 9.6 calls, as compared with 1.8 calls for an attended uncomplicated case of measles, and 1.6 calls for coryza. Although four-fifths of the illnesses in this study were attended by a doctor, 40 percent received only a single call, presumably for diagnosis or for diagnosis and a prescription.

<sup>1</sup> From Statistical Investigations, Division of Public Health Methods, National Institute of Health.

This is the sixteenth of a series of papers on sickness and medical care in this group of families (1-15). The survey of these families was organized and conducted by the Committee on the Costs of Medical Care, the tabulation was done under a cooperative arrangement between the Committee and the Public Health Service. Committee publications based on the results deal primarily with costs and Public Health Service publications primarily with the incidence of illness and the extent and kind of medical care, without regard to cost. As costs are meaningless without some knowledge of the extent and nature of the service received, there is inevitably some overlapping. The Committee staff, particularly Dr. I. S. Falk and Miss Margaret Klem, cooperated in the tabulation of the data.

Special thanks are due to Dr. Mary Gover, who assisted in the analysis, to Mrs. Lily Vanzee Welch, who was in immediate charge of tabulating the data, and to other members of the statistical staff of the Public Health Service for advice and assistance in the preparation of the study.

In contrast to sociological studies of medical care that consider income as the paramount variable, an investigation from these other points of view might be described as a quantitative study of medical care from the standpoint of epidemiology and clinical medicine. Every disease has certain epidemiological characteristics which can be determined only by its mass study in a population group; to such usual characteristics as age and sex incidence, seasonal or chronological variation, geographic spread, and duration in days of disability, in bed, or in a hospital, there might be added socio-epidemiological characteristics such as the proportion of illnesses that come to the attention of a physician and the calls or hospital days commonly received in the treatment of a case. Just as age distribution of a given disease varies under different circumstances, medical care of illness may be expected to vary under urban and rural conditions, with income or ability to purchase care, and with different systems of purchasing medical care.

#### I. SOURCE AND CHARACTER OF DATA

In the study of illness in a group of families in 18 States <sup>2</sup> that was made by the Committee on the Costs of Medical Care (16) and the United States Public Health Service, the record for each illness included all service received from physicians and other practitioners within the 12-month study period. Among the items recorded were type of attendant and the number of home, office, and clinic calls. Thus, data on doctors' calls in the whole canvassed population are available for the survey year.

The composition and characteristics of the group of 8,758 white families which were kept under observation for 12 consecutive months in the years 1928-31 have been considered in some detail in the first report in the series (1). These families, including a total of 39,185 individuals, resided in 130 localities in 18 States representing all geographic sections. Every size of community was included, from metropolitan districts to small industrial and agricultural towns and rural unincorporated areas.<sup>3</sup> With respect to income, the distribution was reasonably similar to the estimated distribution of the general population of the United States at the time of the survey.

Each family was visited at intervals of 2 to 4 months for a period long enough to obtain a sickness record for 12 consecutive months.

<sup>2</sup> The 18 States sampled and the number of canvassed families were as follows: California (890), Colorado (386), Connecticut (100), District of Columbia (99), Georgia (544), Illinois (463), Indiana (494), Kansas (301), Massachusetts (287), Michigan (329), Minnesota (224), New York (1,710), Ohio (1,148), Tennessee (212), Virginia (412), Washington (551), West Virginia (318), Wisconsin (290). Further details about the distribution of the canvassed population are included in a preceding paper (1).

<sup>3</sup> Every community that was included in the study had either a local health department or some other organization employing a visiting-nurse or both; therefore, the most rural areas with no organized community services are not represented.

On the first call a record was made of the number of members of the household, together with sex, age, marital status, occupation, and other facts about each person. On succeeding visits the canvasser recorded all illness that had occurred since the preceding call, with such pertinent facts about each case as the date of onset; whether attended by a doctor and if so the type of each attendant in such terms as private physician, surgeon or other specialist, clinic physician, dentist, chiropodist, osteopath, chiropractor, midwife, or other; number of calls on the case by each practitioner, with separation into home and office for physicians; the total duration of symptoms, of disability, of confinement to bed and to a hospital; and the nature and extent of nursing service. Data about cases that were still sick at the preceding visit were brought up to date and when completed the termination was entered. Thus there are available certain facts about the observed population, the number of illnesses suffered, and the frequency and volume of doctors' services in connection with those illnesses.

*Definition of illness as recorded in survey.*—An illness, for the purpose of this study, was defined as any symptom, disorder, or affection which persisted for one or more days or for which medical service<sup>4</sup> was received or medicine purchased. Illness included the results of both disease and injury. What was actually recorded as a case, however, was necessarily influenced not only by the informant's (usually the housewife's) conception of illness but also by her memory. With visits as infrequent as 2 to 4 months, it was inevitable that many of the nondisabling illnesses would be terminated and forgotten before the next visit of the enumerator. However, these minor cases would seldom be attended by a doctor. Also the few but long institutional cases which are largely missed in family surveys<sup>5</sup> would not contribute to the usual home and office medical practice in a general noninstitutional population. It is felt, therefore, that doctor's services as recorded in this study are reasonably complete for the general family population.

*Definition of doctor's care as recorded in survey.*—An illness was considered as attended if any type of practitioner was called in or con-

<sup>4</sup> Exclusive of dental services, eye refractions, immunizations, and health examinations rendered when no symptoms were present.

<sup>5</sup> The limitations of the house-to-house survey in recording institutional cases was discussed in considerable detail in an earlier paper in this series (14).

No special inquiry was made in this study about mental defectives at home or about persons away from the family throughout the year in such resident institutions as hospitals for the insane, mentally defective, or tuberculous; however, a few such cases were recorded. Physical impairments such as blindness and lost and impaired limbs were not included as sickness unless the defect was treated or otherwise involved some status other than the mere presence of an impairment. These various factors made for a minimum of recorded cases that were sick or disabled or in bed or in a hospital throughout the year of the study. While such cases are always rare as compared with short illnesses, they have an important bearing upon the total volume of medical and hospital care because of their long duration.

sulted about the case,<sup>6</sup> including all hospital cases; the analysis, however, separates attendants into different types. Illnesses with two or more diagnoses were counted as attended if a doctor was called in connection with any diagnosis. Nursing services are tabulated separately; nurses are not included in this analysis of attendants who had primary responsibility for cases, even in the few instances where a nurse was the only attendant. However, a midwife who was the only attendant is counted as a primary attendant because she customarily has charge of a case without the supervision of a doctor. Thus the attendant refers to anyone who assumes primary charge of a case and disregards the quality of the service because no index of quality was available.

The analysis separates the services of medical doctors (M. D.) from all other types of attendants; cases attended only by the hospital or clinic staff are counted in the group of medically attended cases. The medically attended group is further subdivided into attendance by private physicians in general practice, by specialists, and by clinic physicians. The recorded services of specialists are a minimum or understatement because the only physicians so tabulated are those designated as specialists by the family informant. This method may miss many who are listed in directories as specialists but it has the virtue that any physician so designated is generally recognized in his community as a specialist.

*Classification of causes of illness.*—In the present study of 8,758 households by periodic visits, the diagnoses as reported by family informants were submitted to the attending physician for confirmation or correction and his diagnosis substituted for the one reported by the family. While not all cases were attended and reports could not be obtained from all attending physicians, the replies indicated that the housewife usually reported with reasonable accuracy the diagnosis which the physician had given to the family.<sup>7</sup>

Considering an illness in the sense of a continuous period of sickness, only 4.3 percent were designated as due to more than one cause. In general, the more important or more serious cause was assigned as primary, except where a disease like pneumonia is commonly recognized as following measles or influenza, in which case the antecedent condition was taken as primary.<sup>8</sup> In this series of papers, rates per 1,000 population for attended cases and doctors' calls on illness from all causes and from broad disease groups are based on sole or primary

<sup>6</sup> In a few instances the only consultation was by telephone or by some other member of the family going to see the doctor; such cases were counted as attended but no doctor's calls were counted for them. If a doctor treated two or more patients on one call to a family, each patient seen was counted as having a call. See footnotes to table 1 for further details.

<sup>7</sup> See comparison of diagnoses reported by families and by physicians in the Health Survey of 1935-36 (18, table 2).

<sup>8</sup> Further details on the method of classifying the causes of illness are included in the first report in the series (1).



diagnoses only. In computing doctors' calls for specific diseases such as pneumonia, appendicitis, and whooping cough, all cases of the given diagnosis are considered whether it was the sole, primary, or contributory cause of the illness.

*Methods of tabulating and computing.*—In computing attended cases per 1,000 population, illnesses that originated prior to but caused sickness during the study year are included along with cases having their onset within the period of observation; the inclusion of the illnesses with prior onset seemed necessary to give proper representation to chronic ailments. The only date of onset available was the onset of symptoms (nondisabling or disabling); therefore, prior onset does not necessarily mean prior attendance by a doctor. In 7 percent of the attacks of illness onset was prior to the year; this does not mean that in the other 93 percent onset of the disease always occurred within the year, for the patient may have had preceding attacks of the same chronic disease. For all diagnoses commonly considered as chronic, 33 percent were reported with an onset for this illness prior to the study year, as compared with 3 percent for diagnoses ordinarily considered as acute. A large proportion of the cases of such diseases as tuberculosis, cancer, diabetes, and cardio-renal affections originated prior to the study; a preceding paper shows for each diagnosis the number of illnesses with prior onset (1).

The doctors' calls refer in all instances to those *within the 12-month study period*. In computing average calls per case, both complete and incomplete cases are included as cases but the calls refer to those within the study year only. The incomplete cases (those with prior onset and those still sick at the last report) usually average considerably longer durations and presumably have more doctors' calls than the complete cases; therefore, average calls per case which excluded cases with prior onset would be biased toward fewer calls. Computation of the annual calls per 1,000 persons includes all calls within the study year, whether the calls pertain to cases that originated within or prior to the year and whether they pertain to cases that had been terminated or were still sick at the last report on the case.<sup>9</sup> Attended cases with an unknown number of calls are put in at the average calls per case of the same diagnosis attended by the same type of practitioner.

In the present paper no distinction is made between hospital and nonhospital cases, the calls per 1,000 persons and the average calls per case referring always to all cases. Seven percent of all cases and 9 percent of attended cases were hospitalized; and of those hospitalized only 5 percent did not receive home, office, or hospital calls from a

<sup>9</sup> A preceding paper (16) shows the percentage of cases of different types that were incomplete because of prior onset or because still sick at the last report on the case.

private doctor or clinic physician in addition to care by the hospital staff.<sup>10</sup> A later paper will be devoted to hospital care.

## II. EXTENT OF MEDICAL CARE BY DOCTORS AS MEASURED BY VARIOUS TYPES OF RATES

The extent of medical care in a given population group may be measured by several types of rates: (a) The percentage of illnesses that were attended by a doctor, (b) the cases attended by a doctor per 1,000 population, with separation into those attended in the office only and those with one or more home calls, (c) the number of doctors' calls per 1,000 population, with separation into office and home calls, and (d) the number of doctors' calls per attended case. One might further classify by type of attendant and compute such rates for each type of practitioner. It may be worth while to summarize for all causes of illness these various medical-care rates for persons of all ages.

*Summary of doctors' care<sup>11</sup> of illness for all ages.*—In the 8,758 families visited at intervals of 2 to 4 months in urban and rural parts of 18 States, 79 percent of all illnesses were attended by one or more types of practitioners. While some of the cases were attended by two types of practitioners (e. g., physician and specialist) and others by two or more doctors of the same type (e. g., family and other physician in general practice), the great majority (90 to 95 percent of the attended cases) were attended by one doctor only. The attended cases during the year amounted to 647 per 1,000 population, with an annual total of 2,949 calls per 1,000 population,<sup>12</sup> or 2.9 calls per person under

<sup>10</sup> Home, office, and hospital calls by private or clinic doctors for hospitalized illness amounted to 8.7 calls per case, as compared with 4.2 calls per case for all attended illnesses. Doctors' calls per hospitalized cases for the specific diagnoses were in nearly every instance larger than the corresponding figure for all attended cases; thus the greater severity of the cases that were hospitalized led to more doctors' calls per case in addition to supplementary care by the hospital staff.

The diagnoses with a high percentage of cases with no care except by the hospital staff were tuberculosis, 16 percent; nervous diseases, 16 percent; bones, joints, malformations, and diseases of early infancy, 15 percent; communicable diseases, 9 percent; and accidents, 9 percent. No other frequent hospital diagnoses were over 6 percent.

<sup>11</sup> To avoid the repeated use of a long expression such as "all types of practitioners," "doctor" is used in this study in the popular sense to designate any type of healer; and "physician" and "specialist" are used to designate persons with medical degrees. For the most part rates are shown separately for the different types of healers.

<sup>12</sup> The rates quoted for the surveyed population throughout this discussion have been adjusted to the age distribution of the white population of the United States in 1930. In other words, the rates are corrected for the fact that the surveyed sample did not have the same age distribution as the general population of the United States. Percentages of cases and of calls quoted in the text are computed from adjusted rates rather than from the actual numbers of cases and calls; similarly, calls per case are computed from the adjusted rates. In no instance are these measures radically different from similar computations based on the actual numbers of cases; both results are shown in table 1.

The rates for doctors' calls as given in this report do not check exactly with those given in the Committee report (16) because (a) adjustment in that report was made for income but not for age differences, (b) in the present study calls are summated from case records, and cases that had medical attendance with an unknown number of calls are assumed to have had the same number of calls as the average for other cases of the same diagnosis attended by the same type of practitioner.

observation (table 1). There was a total of 4.6 calls during the study year per case attended by any practitioner.<sup>13</sup>

Of the total of 647 attended cases per 1,000 population, 526 cases per 1,000 were attended by private physicians not designated as specialists.<sup>14</sup> Of the total attended cases, 81 percent were attended by these private general physicians, and they made 72 percent of all calls by any type of attendant. Of the 526 cases per 1,000 attended by private physicians not designated as specialists, 294 cases per 1,000 had one or more home calls and the other 232 had office calls only. These cases had a total of 2,114 calls per 1,000 population, 1,051 per 1,000 being home calls and the other 1,063 being calls by the patient to the office of the physician. Thus, of the total cases attended by private physicians not designated as specialists, 56 percent had home calls; the other 44 percent of these cases had office calls only; the office calls on these cases plus the office calls on cases that also had home calls amounted to 50 percent of the total calls by private physicians in general practice (table 1).

In this surveyed group there were 80 cases attended by specialists for each 1,000 population, with a total of 400 specialists' calls per 1,000 population. Thus, there were 5.0 calls by specialists per case so attended; the same case may or may not have had the attendance of a general or other practitioner also. Of all cases attended by any type of practitioner, 12.5 percent were attended by a specialist, and 13.6 percent of all practitioners' calls were made by a specialist.

There were 30 public clinic cases per 1,000 population, with a total of 127 clinic calls per 1,000, or 4.3 clinic calls per public clinic case; the clinic cases may or may not have had other attendants also. Only 4.6 percent of all cases attended by any practitioner had the attendance of a public clinic and 4.3 percent of all calls were calls to a public clinic.

Illness attended by private group clinics amounted to 8.0 cases per 1,000 population, with a total of 28 clinic calls per 1,000 or 3.5 calls per private group clinic case.

There were 33 illnesses attended by nonmedical practitioners per 1,000 population,<sup>15</sup> with a total of 279 calls for these practitioners per

<sup>13</sup> No exact comparison can be made with the results of the National Health Survey of 1935-36 (19) because that study recorded medical care on cases disabling for 7 consecutive days or longer, while the present study recorded care on cases disabling for 1 day or longer and also on nondisabling cases. However, the large volume of care for short cases is evident from the fact that the Health Survey recorded only 900 physicians' calls on cases disabling for 7 days or longer per 1,000 white persons in 83 cities (19), as compared with 2,670 calls (exclusive of nonmedical) per 1,000 population in the present study covering both disabling and nondisabling cases. The Health Survey recorded 7.4 doctors' calls per attended case disabling 7 days or longer, as compared with 4.6 calls per attended case (disabling and nondisabling) in the present study.

<sup>14</sup> The designation of specialist was accepted as given by the family; that is, only those physicians were tabulated as specialists who were so designated by the family informant.

<sup>15</sup> Nonmedical practitioners in table 1 include osteopath, chiropractor, Christian Science and other faith healers, naturopath, midwife, and chiropodist (but not dentist). Data for some of these types are shown separately in later tables.

1,000 population, or 8.5 calls per case so attended. Thus, 5.1 percent of all cases attended by any practitioner had the attendance of a non-medical practitioner (with or without other attendants), but 9.5 percent of all calls were made by these nonmedical practitioners (table 1).

TABLE 1.—Frequency and volume of services by physicians and other practitioners in connection with illness<sup>1</sup> among persons of specific ages for each sex—8,758 canvassed while families in 18 States during 12 consecutive months, 1928-31

Sex and type of rate	All ages <sup>1</sup>		Age									
	Ad-justed <sup>2</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Illness attended by any practitioner:												
Cases attended by any practitioner per 1,000 population:												
Both sexes, all causes .....	647	663	955	706	480	443	567	690	634	613	647	760
Male, all causes .....	559	597	988	725	484	422	358	502	499	501	566	645
Female, all causes .....	724	727	925	686	476	464	719	830	770	750	744	848
Female, all except genital and puerperal .....	645	651	923	685	472	422	517	609	648	704	731	841
Calls by any practitioner per 1,000 population:												
Both sexes, all causes .....	2,949	2,785	2,624	2,201	1,709	1,819	2,915	3,419	3,247	3,279	3,530	5,371
Male, all causes .....	2,410	2,349	2,658	2,338	1,710	1,772	1,869	2,144	2,501	2,560	3,230	4,325
Female, all causes .....	3,423	3,206	2,594	2,068	1,708	1,866	3,678	4,366	4,001	4,159	3,891	6,185
Female, all except genital and puerperal .....	2,815	2,624	2,585	2,063	1,690	1,643	2,211	2,596	3,063	3,790	3,810	6,061
Percent of total cases that were attended by any practitioner:												
Both sexes, all causes .....	78.6	78.1	78.8	72.1	70.6	73.9	84.3	84.1	81.9	80.6	76.6	77.6
Male, all causes .....	77.6	77.3	79.7	72.5	70.7	75.2	78.8	82.2	80.9	80.2	78.3	75.8
Female, all causes .....	79.1	78.7	77.9	71.7	70.5	72.8	86.5	85.0	82.7	81.1	75.1	78.7
Female, all except genital and puerperal .....	77.4	77.0	77.9	71.7	70.6	71.7	82.6	81.1	80.4	80.2	74.8	78.7
Practitioners' calls per case attended:												
Both sexes, all causes .....	4.56	4.20	2.75	3.12	3.56	4.10	5.14	4.96	5.12	5.35	5.46	7.07
Male, all causes .....	4.31	3.93	2.69	3.22	3.53	4.20	5.22	4.27	5.01	5.11	5.71	6.70
Female, all causes .....	4.73	4.41	2.80	3.01	3.59	4.02	5.11	5.26	5.19	5.55	5.23	7.29
Female, all except genital and puerperal .....	4.37	4.03	2.80	3.01	3.58	3.89	4.28	4.26	4.73	5.38	5.21	7.20

<sup>1</sup> Illnesses refer to periods of sickness regardless of the number of diagnosis; that is, these totals for all causes are the sums of data for cases with sole or primary diagnosis. Cases refer to those that lasted for 1 or more days (disabling and nondisabling) including those with prior onset that extended into the study year and those still sick at the last visit; cases with prior onset are counted as attended even when all calls were prior to the study year (only 0.4 percent of the cases were so recorded). If an illness had two types of attendant, it was counted for both attendants but there is no duplication of calls; the total cases attended by any practitioner counts each case only once. A few attended cases were counted as having no calls because all service was rendered within a hospital by the hospital staff. Calls refer to those within the study year only, including those by private physicians upon patients in hospitals. In computing total calls, cases with an unknown number of calls were put in at an average based on cases of the same diagnosis group with known numbers of calls, exclusive of the few cases with 100 or more calls. Services of dentists were not recorded in terms of calls and no estimate for calls was put into this table for the few illnesses (about 1 percent) attended by dentists; cases, however, are included. For dental services for the well and the sick in this group of families, see preceding paper (13).

Illness from accident is included along with that due to disease.

<sup>2</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>3</sup> Rates in the form of cases or calls per 1,000 population are adjusted by the direct method to the age distribution of the white population of the death registration States in 1930 as a standard population; this population is given for specific ages in table 1 of a preceding paper (4). The adjustment method involves the weighting of the age specific rates for the canvassed population according to the age distribution of the standard population. The details of the process are given under the heading of "corrected death rates" in Pearl (17), pp. 269-271.

Figures in the "adjusted" column on calls per case represent the result of dividing the adjusted rate for calls per 1,000 by the adjusted rate for cases per 1,000; figures in the "adjusted" column for percentage of cases or percentage of calls represent the percentage that one adjusted rate per 1,000 is of another adjusted rate per 1,000.

**TABLE 1.—Frequency and volume of services by physicians and other practitioners in connection with illness among persons of specific ages for each sex—8,753 canvassed white families in 18 States during 12 consecutive months, 1928-31—Continued**

Sex and type of rate	All ages		Age									
	Ad- just- ed	Crude	Un- der 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Illness attended by private physi- cians not designated as spe- cialists: <sup>a</sup>												
Cases attended by private physi- cians per 1,000 population:												
Both sexes, all causes.....	526	537	776	572	379	361	473	570	499	491	522	660
Male, all causes.....	458	487	809	590	387	351	298	417	394	405	473	556
Female, all causes.....	585	586	745	554	371	372	602	683	605	596	581	742
Female, all except genital and puerperal.....	518	522	744	553	367	335	429	497	502	557	571	734
Cases with home calls per 1,000 population:												
Both sexes, all causes.....	294	307	533	368	202	168	247	300	242	240	274	456
Male, all causes.....	238	265	551	369	205	153	128	177	164	190	218	339
Female, all causes.....	343	348	516	368	199	183	335	391	321	302	341	547
Female, all except genital and puerperal.....	298	305	516	368	198	160	217	263	253	280	335	542
Cases with office calls only per 1,000 population:												
Both sexes, all causes.....	232	230	243	204	177	193	226	270	257	251	248	204
Male, all causes.....	220	222	258	221	182	198	170	240	230	215	255	217
Female, all causes.....	242	238	229	186	172	189	267	292	284	294	240	195
Female, all except genital and puerperal.....	220	217	228	185	169	175	212	234	249	277	236	192
Total calls by physicians per 1,000 population:												
Both sexes, all causes.....	2,114	1,984	1,969	1,639	1,197	1,305	2,174	2,426	2,118	2,263	2,424	4,416
Male, all causes.....	1,766	1,711	2,024	1,794	1,294	1,319	1,398	1,480	1,683	1,721	2,388	3,645
Female, all causes.....	2,412	2,248	1,920	1,488	1,099	1,291	2,740	3,128	2,556	2,928	2,468	5,016
Female, all except genital and puerperal.....	1,944	1,800	1,916	1,487	1,080	1,092	1,593	1,772	1,853	2,627	2,407	4,941
Home calls by physicians per 1,000 population:												
Both sexes, all causes.....	1,051	1,001	1,335	1,029	604	562	801	1,038	880	946	1,062	3,178
Male, all causes.....	818	832	1,388	1,121	650	532	393	510	583	624	1,047	2,256
Female, all causes.....	1,249	1,163	1,285	940	557	592	1,100	1,431	1,180	1,341	1,081	3,897
Female, all except genital and puerperal.....	1,042	965	1,283	939	556	502	606	843	840	1,210	1,052	3,872
Office calls by physicians per 1,000 population:												
Both sexes, all causes.....	1,063	983	634	610	593	743	1,373	1,388	1,238	1,317	1,362	1,238
Male, all causes.....	948	879	636	673	644	787	1,005	970	1,100	1,097	1,341	1,389
Female, all causes.....	1,163	1,085	635	548	542	699	1,640	1,697	1,376	1,587	1,387	1,119
Female, all except genital and puerperal.....	902	835	633	548	524	590	987	929	1,013	1,417	1,355	1,069
Home calls by physicians per case with home calls:												
Both sexes, all causes.....	3.57	3.26	2.51	2.79	2.99	3.35	3.24	3.46	3.64	3.94	3.88	6.97
Male, all causes.....	3.44	3.14	2.52	3.04	3.17	3.47	3.08	2.88	3.56	3.29	4.81	6.66
Female, all causes.....	3.64	3.35	2.49	2.55	2.80	3.24	3.29	3.66	3.67	4.44	3.17	7.12
Female, all except genital and puerperal.....	3.49	3.17	2.49	2.56	2.81	3.14	2.79	3.21	3.32	4.32	3.14	7.14
Percent of cases attended by physicians that had home calls:												
Both sexes, all causes.....	55.9	57.1	68.7	64.4	53.2	46.5	52.2	52.6	48.5	48.9	52.4	69.0
Male, all causes.....	52.0	54.4	68.1	62.5	52.9	43.7	42.9	42.5	41.6	46.8	46.1	60.9
Female, all causes.....	58.6	59.3	69.3	66.4	53.6	49.1	55.6	57.2	53.1	50.7	58.6	73.8
Female, all except genital and puerperal.....	57.6	58.4	69.3	66.5	53.8	47.7	50.6	53.0	50.4	50.3	58.6	73.8
Percent of cases attended by physicians that had office calls only:												
Both sexes, all causes.....	44.1	42.9	31.3	35.6	46.8	53.5	47.8	47.4	51.5	51.1	47.6	31.0
Male, all causes.....	48.0	45.6	31.9	37.5	47.1	56.3	57.1	57.5	58.4	53.2	53.9	39.1
Female, all causes.....	41.4	40.7	30.7	33.6	46.4	50.9	44.4	42.8	46.9	49.3	41.4	26.2
Female, all except genital and puerperal.....	42.4	41.6	30.7	33.5	46.2	52.3	49.4	47.0	49.6	49.7	41.4	26.2

<sup>a</sup> "Specialists" as used in this study refers to physicians so designated by family informants, regardless of listing in any directory of physicians.



TABLE 1.—*Frequency and volume of services by physicians and other practitioners in connection with illness among persons of specific ages for each sex—8,758 canvassed while families in 18 States during 12 consecutive months, 1928-31—Continued.*

Sex and type of rate	All ages		Age										
	Ad-just-ed	Crude	Un-der 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
Illness attended by private physicians not designated as specialists—Continued.													
Percent of physicians' calls that were home calls:													
Both sexes, all causes.....	49.7	50.4	67.8	62.8	50.4	43.1	36.9	42.8	41.6	41.8	43.8	72.0	
Male, all causes.....	46.3	48.6	68.6	62.5	50.2	40.3	28.1	34.4	34.7	36.3	43.9	61.9	
Female, all causes.....	51.8	51.8	66.9	63.1	50.7	45.9	40.1	45.7	46.2	45.8	43.8	77.7	
Female, all except genital and puerperal.....	53.6	53.6	67.0	63.2	51.5	45.9	38.0	47.6	45.3	46.1	43.7	78.3	
Percent of physicians' calls that were office calls:													
Both sexes, all causes.....	50.3	49.6	32.2	37.2	49.6	56.9	63.1	57.2	58.4	58.2	56.2	28.0	
Male, all causes.....	53.7	51.4	31.4	37.5	49.8	59.7	71.9	65.6	65.3	63.7	56.1	38.1	
Female, all causes.....	48.2	48.2	33.1	36.9	49.3	54.1	59.9	54.3	53.8	54.2	56.2	22.3	
Female, all except genital and puerperal.....	46.4	46.4	33.0	36.8	48.5	54.1	62.0	52.4	54.7	53.9	56.3	21.7	
Percent of all attended cases that were attended by physicians not designated as specialists:													
Both sexes, all causes.....	81.4	81.0	81.2	81.0	79.1	81.5	83.5	82.6	78.7	80.1	80.7	86.9	
Male, all causes.....	81.9	81.5	81.9	81.4	80.1	83.1	83.1	83.1	79.0	80.9	83.5	86.2	
Female, all causes.....	80.8	80.6	80.5	80.7	78.1	80.1	83.7	82.4	78.5	79.5	78.1	87.4	
Female, all except genital and puerperal.....	80.3	80.1	80.6	80.7	77.9	79.3	83.1	81.6	77.5	79.1	78.1	87.3	
Percent of all practitioners' calls that were calls by physicians not designated as specialists:													
Both sexes, all causes.....	71.7	71.2	75.1	74.5	70.1	71.7	74.6	71.0	65.2	69.0	68.7	82.2	
Male, all causes.....	73.3	72.9	76.2	76.7	75.7	74.4	74.8	69.1	67.3	67.2	73.9	84.3	
Female, all causes.....	70.5	70.1	74.0	72.0	64.3	69.2	74.5	71.7	63.9	70.4	63.4	81.1	
Female, all except genital and puerperal.....	69.1	68.6	74.1	72.1	63.9	66.5	72.1	68.3	60.5	69.3	63.2	81.5	
Illness attended by specialists:													
Cases attended by specialists per 1,000 population:													
Both sexes, all causes.....	80.5	85.1	135.9	90.3	56.7	55.1	66.1	89.9	83.5	71.9	75.4	69.1	
Male, all causes.....	72.6	79.3	141.7	94.0	59.5	53.7	51.5	64.1	71.8	60.7	65.9	66.4	
Female, all causes.....	87.4	90.6	129.7	86.7	53.8	56.5	76.7	109.0	95.2	85.7	86.7	71.3	
Female, all except genital and puerperal.....	77.7	81.1	128.9	86.7	53.8	56.5	62.0	80.0	75.2	79.7	82.2	69.5	
Calls by specialists per 1,000 population:													
Both sexes, all causes.....	400	398	414	336	260	264	341	513	485	395	470	443	
Male, all causes.....	340	343	419	315	251	219	286	323	369	400	443	412	
Female, all causes.....	451	452	407	356	270	308	381	655	602	389	504	467	
Female, all except genital and puerperal.....	388	388	406	356	270	308	307	424	484	361	484	460	
Specialists' calls per case attended by specialist:													
Both sexes, all causes.....	4.97	4.68	3.05	3.72	4.59	4.79	5.16	5.71	5.81	5.49	6.24	6.41	
Male, all causes.....	4.68	4.32	2.96	3.35	4.22	4.09	5.57	5.03	5.14	6.59	6.72	6.21	
Female, all causes.....	5.16	4.98	3.14	4.11	5.01	5.45	4.97	6.01	6.32	4.54	5.81	6.55	
Female, all except genital and puerperal.....	4.99	4.78	3.15	4.11	5.01	5.45	4.95	5.30	6.43	4.53	5.89	6.62	
Percent of all attended cases that were attended by specialists:													
Both sexes, all causes.....	12.5	12.8	14.2	12.8	11.8	12.4	11.7	13.0	13.2	11.7	11.7	9.1	
Male, all causes.....	13.0	13.3	14.3	13.0	12.3	12.7	14.4	12.8	14.4	12.1	11.7	10.3	
Female, all causes.....	12.1	12.5	14.0	12.6	11.3	12.2	10.7	13.1	12.4	11.4	11.7	8.4	
Female, all except genital and puerperal.....	12.1	12.5	14.0	12.7	11.4	13.4	12.0	13.1	11.6	11.3	11.3	8.3	
Percent of all practitioners' calls that were specialists' calls:													
Both sexes, all causes.....	13.6	14.3	15.8	15.3	15.2	14.5	11.7	15.0	14.9	12.1	13.3	8.2	
Male, all causes.....	14.1	14.6	15.8	15.5	14.7	12.4	15.3	15.1	14.8	15.6	13.7	9.5	
Female, all causes.....	13.2	14.1	15.7	17.2	15.8	16.5	10.4	15.0	15.1	9.4	12.9	7.6	
Female, all except genital and puerperal.....	13.8	14.8	15.7	17.3	15.9	18.7	13.9	16.3	15.8	9.5	12.7	7.6	

<sup>4</sup> "Specialists" as used in this study refers to physicians so designated by family informants, regardless of listing in any directory of physicians.

<sup>5</sup> Not midwife table d

**TABLE 1.—Frequency and volume of services by physicians and other practitioners in connection with illness among persons of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31—Continued**

Sex and type of rate	All ages		Age										
	Ad-just-ed	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
Illness attended by public clinics:													
Public clinic cases per 1,000 population:													
Both sexes, all causes .....	29.5	31.8	43.0	42.9	38.1	18.4	32.5	29.6	26.5	19.4	21.1	21.1	
Male, all causes .....	22.3	25.1	37.3	41.5	34.3	18.3	13.4	17.1	16.5	12.0	13.7	22.8	
Female, all causes .....	36.2	38.2	48.8	44.2	42.0	18.4	46.5	38.9	36.6	28.5	29.9	19.6	
Female, except genital and puerperal .....	29.5	31.8	48.4	43.5	42.0	15.8	21.2	22.2	26.1	27.2	29.9	19.6	
Public clinic calls per 1,000 population:													
Both sexes, all causes .....	127	130	138	127	138	87	191	157	152	77	69	84	
Male, all causes .....	94	96	124	115	95	92	115	148	66	35	41	92	
Female, all causes .....	159	163	153	139	183	81	247	164	238	129	102	78	
Female, all except genital and puerperal .....	123	129	149	135	183	70	98	80	179	124	102	78	
Public clinic calls per case attended by public clinics:													
Both sexes, all causes .....	4.30	4.10	3.22	2.96	3.63	4.71	5.87	5.31	5.73	3.97	3.26	4.00	
Male, all causes .....	4.23	3.84	3.32	2.76	2.76	5.00	8.58	8.66	4.02	2.91	3.00	4.00	
Female, all causes .....	4.39	4.26	3.13	3.13	4.36	4.43	5.30	4.21	6.50	4.51	3.40	4.00	
Female, all except genital and puerperal .....	4.16	4.04	3.08	3.10	4.36	4.42	4.62	3.60	6.86	4.56	3.40	4.00	
Percent of all attended cases that were public clinic cases:													
Both sexes, all causes .....	4.6	4.8	4.5	6.1	7.9	4.1	5.7	4.3	4.2	3.2	3.3	2.8	
Male, all causes .....	4.0	4.2	3.8	5.7	7.1	4.3	3.7	3.4	3.3	2.4	2.4	3.5	
Female, all causes .....	5.0	5.3	5.3	6.4	8.8	4.0	6.5	4.7	4.7	3.8	4.0	2.3	
Female, all except genital and puerperal .....	4.6	4.9	5.3	6.3	8.9	3.7	4.1	3.7	4.0	3.9	4.1	2.3	
Percent of all practitioners' calls that were public clinic calls:													
Both sexes, all causes .....	4.3	4.7	5.3	5.7	8.1	4.8	6.6	4.6	4.7	2.3	1.9	1.6	
Male, all causes .....	3.9	4.1	4.7	4.9	5.5	5.2	6.2	6.9	2.6	1.3	1.3	2.1	
Female, all causes .....	4.7	5.1	5.9	6.7	10.7	4.4	6.7	3.8	5.9	3.1	2.6	1.3	
Female, all except genital and puerperal .....	4.4	4.9	5.8	6.5	10.8	4.2	4.4	3.1	5.8	3.3	2.7	1.3	
Illness attended by private group clinics:													
Private group clinic cases per 1,000 population:													
Both sexes, all causes .....	8.0	8.5	12.7	8.9	6.3	5.9	3.8	10.1	9.9	5.7	5.4	8.0	
Male, all causes .....	7.3	7.8	11.7	7.5	4.8	3.3	3.4	8.7	10.4	8.1	5.0	6.9	
Female, all causes .....	8.5	9.2	13.8	10.4	7.9	8.5	4.1	11.1	9.5	2.7	6.0	8.9	
Female, all except genital and puerperal .....	7.6	8.3	13.8	10.4	7.9	8.5	4.1	6.5	8.5	2.7	6.0	8.9	
Private group clinic calls per 1,000 population:													
Both sexes, all causes .....	28.1	30.0	38.5	27.5	23.6	26.6	10.9	35.6	45.2	18.8	19.7	14.0	
Male, all causes .....	24.8	26.6	37.7	26.6	10.4	17.7	15.7	25.4	46.7	21.1	14.9	13.7	
Female, all causes .....	31.1	33.3	39.5	28.3	37.1	35.5	7.3	43.2	43.7	15.9	25.4	14.3	
Female, all except genital and puerperal .....	25.1	26.8	39.5	28.3	37.1	35.5	7.3	12.7	34.2	15.9	25.4	14.3	
Illness attended by nonmedical practitioners <sup>a</sup>													
Cases attended by nonmedical practitioners per 1,000 population:													
Both sexes, all causes .....	32.9	28.8	7.3	10.5	10.3	19.7	27.8	36.3	48.6	61.5	61.1	43.1	
Male, all causes .....	23.7	21.8	7.5	11.7	10.0	15.1	13.4	25.8	36.3	45.0	39.8	25.2	
Female, all causes .....	42.0	35.6	7.1	9.3	10.6	24.3	38.4	44.2	61.0	81.7	86.7	57.0	
Female, all except genital and puerperal .....	38.6	32.6	7.1	9.3	10.6	21.0	28.6	36.7	57.6	77.0	86.7	55.3	
Calls by nonmedical practitioners per 1,000 population:													
Both sexes, all causes .....	279	243	63	72	89	137	198	287	448	525	547	414	
Male, all causes .....	185	172	52	88	59	124	54	168	336	384	343	163	
Female, all causes .....	369	311	75	56	120	150	303	375	561	697	792	610	
Female, all except genital and puerperal .....	336	281	75	56	120	138	206	307	513	662	792	567	

<sup>a</sup> Nonmedical includes osteopath, chiropractor, Christian Science practitioner, faith healer, naturopath, midwife, chiroprapist, and others who are not usually graduates of medical schools, except that in this table dentists are not included as nonmedical.

TABLE 1.—Frequency and volume of services by physicians and other practitioners in connection with illness among persons of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31—Continued

Sex and type of rate	All ages			Age									
	Ad-justed	Crude	Un-der 5 mmm	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
Illness attended by nonmedical practitioners—Continued.													
Nonmedical calls per case attended by nonmedical practitioners:													
Both sexes, all causes .....	8.47	8.42	8.73	6.87	8.70	6.98	7.10	7.89	9.22	8.53	8.96	9.60	
Male, all causes .....	7.80	7.89	7.00	7.55	5.91	8.26	4.00	6.50	9.27	8.53	8.63	6.45	
Female, all causes .....	8.79	8.72	10.63	6.04	11.37	6.19	7.89	8.50	9.19	8.54	9.14	10.69	
Female, all except genital and puerperal .....	8.70	8.63	10.63	6.04	11.37	6.56	7.20	8.36	8.90	8.59	9.14	10.26	
Percent of all attended cases that were attended by nonmedical practitioners:													
Both sexes, all causes .....	5.1	4.3	.8	1.5	2.1	4.4	4.9	5.3	7.7	10.0	9.4	5.7	
Male, all causes .....	4.2	3.7	.8	1.6	2.1	3.6	3.7	5.1	7.3	9.0	7.0	3.9	
Female, all causes .....	5.8	4.9	.8	1.4	2.2	5.2	5.3	5.3	7.9	10.9	11.7	6.7	
Female, all except genital and puerperal .....	6.0	5.0	.8	1.4	2.3	5.0	5.5	6.0	8.9	10.9	11.9	6.6	
Percent of all practitioners' calls that were calls by nonmedical practitioners:													
Both sexes, all causes .....	9.5	8.7	2.4	3.3	5.2	7.5	6.8	8.4	13.8	16.0	15.5	7.7	
Male, all causes .....	7.7	7.3	2.0	3.8	3.5	7.0	2.9	7.8	13.4	15.0	10.6	3.8	
Female, all causes .....	10.8	9.7	2.9	2.7	7.1	8.1	8.2	8.6	14.0	16.8	20.4	9.9	
Female, all except genital and puerperal .....	11.9	10.7	2.9	2.7	7.1	8.4	9.3	11.8	16.7	17.5	20.8	9.3	
Population (years of life):													
Both sexes .....		38,544	5,513	5,715	4,568	3,050	2,119	5,640	5,930	3,351	1,473	998	
Male .....		18,896	2,808	2,820	2,301	1,527	894	2,402	2,979	1,845	804	437	
Female .....		19,627	2,684	2,895	2,267	1,523	1,225	3,238	2,951	1,506	669	561	

*Age and sex differences in rates of medical care.*—The frequency and volume of medical care varies with age and sex for at least three reasons: (a) The amount of illness varies with age and sex; although not all cases are attended and the number of calls per case varies, the attended cases and the calls per 1,000 persons definitely reflect the frequency of illness. (b) The diseases that occur most frequently in one age group are not the same as those that are most frequent at other ages, and the different diseases require varying amounts of medical care. (c) The severity of a given disease varies with age and so requires varying amounts of medical care. Figures 1 and 2 and table 1 show for males and females of different ages attended cases and doctors' calls per 1,000 population; rates for the various types of practitioners are shown separately. Because puerperal conditions and female genital diseases require considerable medical care that is not needed by men, the rates for females are shown as a total for all causes, and for causes other than female genital and puerperal diagnoses.

No detailed discussion of these charts is needed, but certain characteristics of the curves (figs. 1 and 2) may be pointed out. In a way, the number of doctors' calls measures the severity of a case in much

the same manner as the number of days disabled or in bed. Thus, here, as in the duration of illness (14), there is a larger increase for the older ages in the number of doctors' calls per 1,000 population than in the number of attended cases. There is some increase in the older ages in the incidence of home-attended cases, but the greatest increase occurs in home calls per 1,000. Office calls, on the other hand, show little or no increase in the oldest ages. Also, in the youngest ages, the high rate that occurs for home calls among children under 5 years is entirely missing in the curve for office calls.

Specialists' cases (fig. 2), like other physicians' cases, are high for children and for women of the childbearing ages. The percentage of attended cases that had a specialist does not vary greatly with age; however, there is some decline as age increases in both the percentage of cases attended by specialists and of calls made by specialists. Public clinic cases are likewise more frequent in childhood and at the childbearing ages.

The age curves of attendance by nonmedical practitioners vary greatly from those for physicians, specialists, and public clinics. Nonmedical practice is at a minimum among children of both sexes, but at about 20 years the rates per 1,000 females for cases and calls by these practitioners begin a definite rise with a peak at 55-64 years and a decline thereafter. Cases attended by nonmedical practitioners are fewer among males and the peak is reached in the age group 45-54 years, with declining rates thereafter. As measured by the percentage of all attended cases and the percentage of total calls made by the nonmedical practitioners, the showing with respect to males and females is approximately the same.

The various age curves in figures 1 and 2 usually show little difference between the sexes in childhood. At about 20 years the curves of attended cases and also of calls per 1,000 population definitely diverge for males and females, with an excess for females throughout the adult ages. These higher rates for women reflect an excess in total illness rather than in the proportion of cases attended or in doctors' calls per case; the curves in the upper right corner of figure 1 for calls per attended case show little difference between the sexes at any age. The nature of the excess in illness among women was discussed in some detail in a preceding paper (14) and need not be repeated here. Considering cases of all ages attended by any practitioner the rate (adjusted for age) for males was 559 per 1,000 as compared with 724 for all causes among females and 645 for all except female genital and puerperal diagnoses, an excess of 15 percent for comparable diagnoses. This excess in attended cases is about the same as the corresponding excesses of 16 percent for all cases, 9 percent for disabling cases, and 19 percent for bed cases, including both attended and nonattended (14). Of the total cases among men, 78 percent

were attended by some practitioner, as compared with 79 percent for all cases among females and 77 percent for all except female genital and puerperal diagnoses. Table 1 shows by age and sex the percentage of all cases that were attended by some practitioner.

Considering cases attended at home and home calls per 1,000 persons (fig. 1), the relative excess for women is slightly greater. The

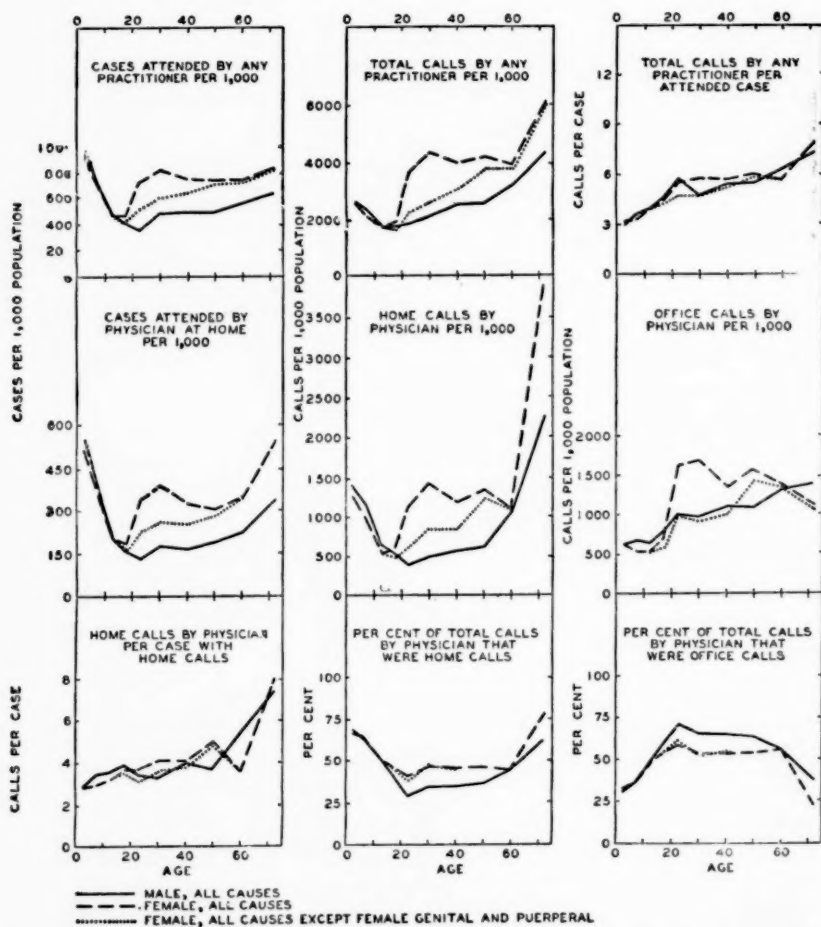


FIGURE 1.—Annual volume of medical care for illness from all causes as measured by various types of rates for males and females of specific ages—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31. (Scales are so made that the adjusted rate for all ages of both sexes represents an interval on the vertical rate scale that corresponds to 30 years on the horizontal age scale.)

home calls per case that had home calls is about the same for males and females of corresponding ages, but the percentage of total calls by these doctors that were home calls is slightly greater for women than men. The small excess for women is not accounted for by female genital and puerperal conditions; the percentage of home calls for women was about the same for all cases and for cases exclusive of these diagnoses.



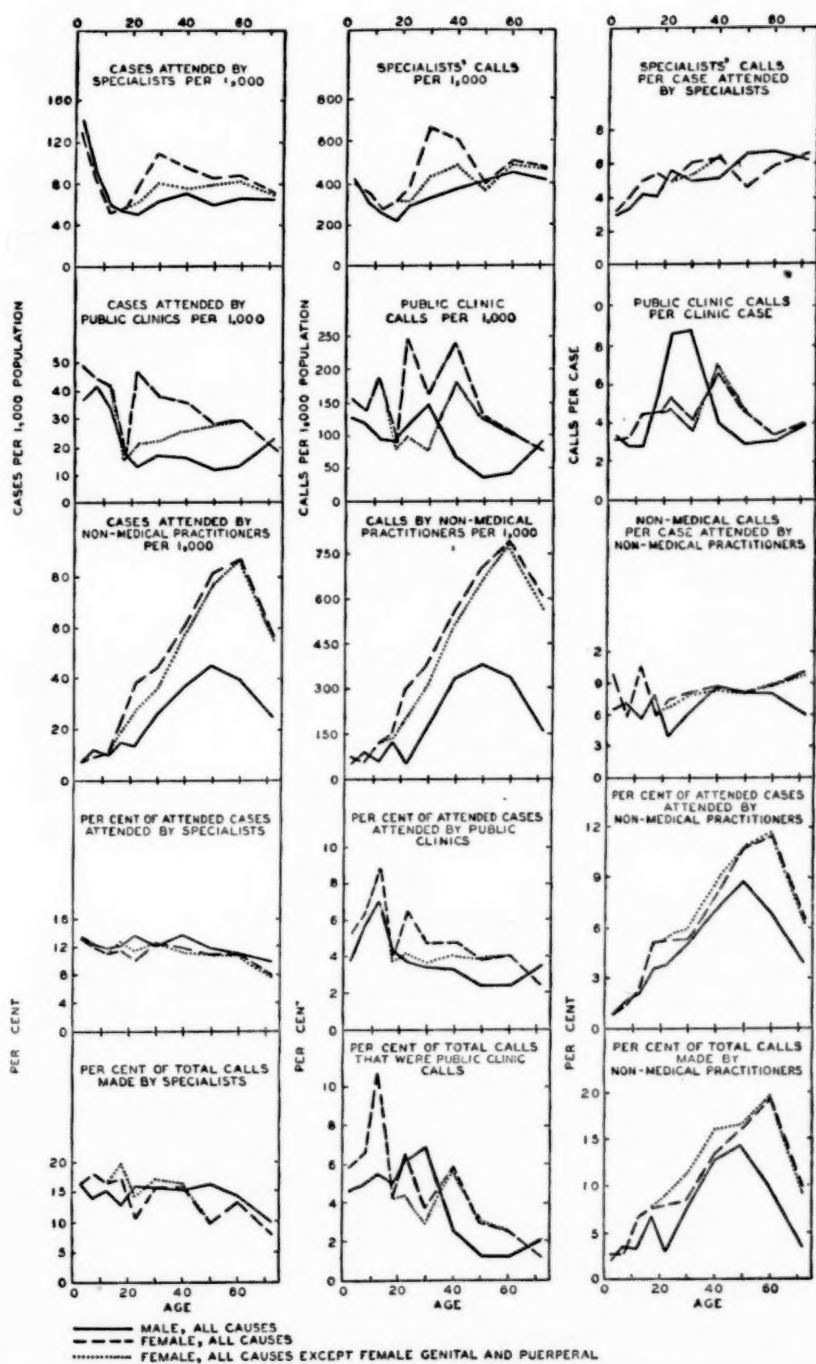


FIGURE 2.—Annual volume of medical care for illness from all causes as measured by various types of rates for males and females of specific ages (continued).

It may be worth noting that cases attended at home and home calls per 1,000 persons (fig. 1) are very slightly but consistently higher for boys under 15 years than for girls of those ages. This excess for boys is true for cases attended by specialists per 1,000 persons, but it is not true for specialists' calls per 1,000. Public clinic cases and calls seem to be more frequent for girls than boys under 15 years. However, there is little difference between boys and girls under 15 years with respect to the total attended cases and the total calls by any practitioner per 1,000.

Attended cases and calls by specialists show an excess for females, but the excess is not large when genital and puerperal diagnoses are eliminated. The percentages of cases and of calls by specialists are about the same for men and women under 40 years but above that age they may be slightly greater for men (fig. 2). For persons of all ages, cases attended by specialists amounted to 73 per 1,000 males as compared with rates for females of 87 for all causes and 78 for all except female genital and puerperal diagnoses, an excess of 7 percent for comparable diagnoses. Specialists' calls amounted to 340 per 1,000 males as compared with rates for females of 451 for all causes and 388 for all except genital and puerperal diagnoses, an excess of 14 percent for females. The excesses for women in these rates for specialists represent excesses in illness rather than in the attendance of a specialist; among men 13 percent of all attended cases had a specialist, as compared with 12 percent for women for all causes and the same figure for all except genital and puerperal diagnoses. Of the total calls by any practitioner, 14 percent of those for males were made by a specialist as compared with percentages for women of 13 for all causes and 14 for all except genital and puerperal diagnoses (table 1).

Similarly, there is an excess for females over males in cases attended by public clinics. There were 22 public clinic cases per 1,000 males as compared with rates for females of 36 for all causes and 30 for all except genital and puerperal diagnoses, an excess of 36 percent for comparable diagnoses. Public clinic calls amounted to 94 per 1,000 males as compared with rates for females of 159 for all causes and 123 for all except female genital and puerperal diagnoses, an excess of 31 percent for comparable diagnoses. Public clinic calls per public clinic case amounted to 4.2 for males as compared with averages for females of 4.4 for all cases and 4.2 for cases exclusive of female genital and puerperal diagnoses. Of the total attended illnesses for males, 4.0 percent were public clinic cases as compared with percentages for females of 5.0 for all cases and 4.6 for all except female genital and puerperal diagnoses. Public clinic calls for males amounted to 3.9 percent of all calls as compared with percentages for females of 4.7 for all causes and 4.4 for all except female genital and puerperal diagnoses.

The large increase in cases and calls by nonmedical practitioners<sup>16</sup> in the adult and middle ages has already been noted. Considering the curves for the two sexes separately (fig. 2), the increase during the middle ages in the use of this type of practitioner is much greater among women than men. For all age groups above 20 years there is a large excess for women over men in nonmedically attended cases and nonmedical calls, only a small part of which is accounted for by female genital and puerperal diagnoses. Midwives are about the only persons included in the nonmedical group who commonly attend confinements, and the number of these cases attended by midwives was small in the surveyed group. Considering all ages, all cases attended by nonmedical practitioners amounted to 24 per 1,000 males as compared with rates for females of 42 for all causes and 39 for all except female genital and puerperal diagnoses, an excess of 62 percent for comparable diagnoses. Calls by nonmedical practitioners amounted to 185 per 1,000 males as compared with rates for females of 369 for all causes and 336 per 1,000 for all except female genital and puerperal, an excess of 82 percent for comparable diagnoses. Calls per case were somewhat higher for women than men, 7.8 for men as compared with averages for women of 8.8 for all causes and 8.7 for all except female genital and puerperal diagnoses.

### III. VARIATION IN VOLUME OF MEDICAL CARE WITH SIZE OF CITY, GEOGRAPHIC SECTION, AND INCOME

Rates that have been given above refer to the whole surveyed group of families. As might be expected, certain classifications of the population have rates that vary considerably from the averages for the whole group.

*Size of city and volume of medical care.*—Cities and towns were tabulated in three classes to compare the volume of medical care:<sup>17</sup>

(a) Cities of 100,000 or more population, (b) cities of 5,000 to 100,000 population, and (c) towns under 5,000 and rural areas. For several reasons given in notes to table 2 these tabulations as well as those in the Committee report (16) are not strictly comparable with other tables in this paper, but they give an accurate comparison of the variation with size of city and geographic area. In calls by any practitioner on account of illness, the rate per 1,000 population in cities over 100,000 was 34 percent higher than that for towns under

<sup>16</sup> Nonmedical practitioners here include osteopath, chiropractor, Christian Science and other faith healers, naturopath, midwife, and chiropodist (but not dentist).

<sup>17</sup> The data here reviewed on the volume of medical care by size of city and geographic section are based largely on unpublished tabulations for this group of families which were made under the direction of G. St. J. Perrott and I. S. Falk to supplement in this respect the report of the Committee on the Costs of Medical Care (16).

5,000 and rural areas, with the rate for cities of 5,000-100,000 population falling logically between the two extremes. The excess in doctors' calls in the large cities represents a higher percentage of attended cases and more calls per case rather than more illness; illness rates per 1,000 were not greatly different in the three city-size classes (table 2).

TABLE 2—*Services of physicians and other practitioners in connection with illness in cities of different sizes—7,434 canvassed white families in 14 States,<sup>1</sup> 1928-31*

Type of rate	All city sizes <sup>1</sup> (simple means of rates in the three sizes)	Cities of 100,000 or over	Cities 5,000-100,000	Towns under 5,000 and rural areas
		Annual rates per 1,000 population <sup>2</sup>		
Total illnesses <sup>3</sup> per 1,000 population.....	830	795	846	850
Calls <sup>4</sup> per 1,000 population:				
Calls by any practitioner.....	2,641	3,003	2,679	2,240
Calls by all private physicians and specialists....	2,134	2,420	2,233	1,750
Home calls by private general physicians....	1,063	1,192	1,168	829
Clinic calls <sup>4</sup> .....	311	362	245	325
Calls by nonmedical practitioners.....	196	221	201	165
Calls by all practitioners per total case.....	3.18	3.78	3.17	2.64
Population under observation.....	32,686	11,593	8,550	12,543

<sup>1</sup> The families in Massachusetts, Connecticut, Colorado, and Washington State are not included because this table is a summary of the same tabulation made for table 3.

<sup>2</sup> These rates are not comparable with others in this paper (except table 3) because (a) they are built up from individual summary cards without allowance for occasional cases with an unknown number of calls, (b) they are not adjusted for age, (c) they are not based on all of the canvassed families, and (d) the rates for cities of all sizes are simple means of the rates in the 3 city-size classes.

<sup>3</sup> All illness, both attended and not attended by doctors.

<sup>4</sup> Calls in connection with illness except that clinic care includes also calls for immunization, well-baby care, and health (including school) examination.

Both total and home calls by private physicians (M. D.) per 1,000 population show roughly the same relative excess in large cities over small towns and rural areas, 38 and 44 percent, respectively. Clinic calls per 1,000 population (including services to the well and to the sick) show only 11 percent excess for large cities over towns and rural areas, with fewer calls in cities of 5,000-100,000 than in small towns. Ordinarily one might expect more clinic service in large cities, but all communities sampled for this study had a health department or a visiting nurse or both, so that the most rural communities with the least public service were not included. Therefore, the city-rural results for clinic calls in this study are probably atypical.

Calls per 1,000 population by such nonmedical practitioners as osteopaths, chiropractors, and faith healers were 34 percent higher in large cities than in small towns and rural areas, with cities of 5,000-100,000 falling between the two extremes.

*Geographic section and volume of medical care.*—The great majority of the families surveyed in the Northeast were in New York State, so in this paper the data for that State are used instead of the Northeast. In the West, California supplied a considerable share of the

schedules and probably represents conditions that vary from those in Colorado and Washington, the other western States sampled in the survey. Therefore, the geographic sections considered in this study are: (a) New York State, (b) North Central, (c) South, (d) California. States included in each section are given in footnotes to table 3. The urban-rural distribution of the surveyed families differed greatly in these areas and the variation was not typical of the situation in the whole State or section; therefore, the data in table 3 consist of simple averages of rates for three city-size classes <sup>18</sup> for each geographic section.

TABLE 3.—*Services of physicians and other practitioners in connection with illness in four geographic sections* <sup>1</sup>—7,434 canvassed white families in 14 States, 1928-31

Type of rate	All 4 <sup>1</sup> sections	New York State	North Central <sup>1</sup>	South <sup>1</sup>	California
Simple means of annual rates in 3 city-size classes <sup>2</sup>					
Total illnesses <sup>3</sup> per 1,000 population.....	830	887	791	828	845
Calls <sup>4</sup> per 1,000 population:					
Calls by any practitioner.....	2,641	2,637	2,551	2,621	3,147
Calls by all private physicians and specialists.....	2,134	2,049	2,079	2,323	2,161
Home calls by private general physicians.....	1,063	1,260	899	1,250	878
Clinic calls <sup>4</sup> .....	311	456	255	223	535
Calls by nonmedical practitioners.....	196	132	217	75	451
Calls by any practitioner per total case.....	3.18	2.97	3.23	3.17	3.72
Population under observation.....	32,686	7,164	14,313	7,554	3,655

<sup>1</sup> The geographic areas used were: North Central, Illinois, Ohio, Michigan, Indiana, Wisconsin, Minnesota, and Kansas; South, District of Columbia, Virginia, West Virginia, Tennessee, Georgia; the Northeast is represented by New York State, and the West by California. The families in Massachusetts, Connecticut, Colorado, and Washington State are not included.

<sup>2</sup> These rates are not comparable with others in this paper (except table 2) because (a) they are built up from individual summary cards without allowance for occasional cases with an unknown number of calls, (b) they are not adjusted for age, (c) they are not based on all of the canvassed families, and (d) they are simple means of rates for 3 city-size classes.

<sup>3</sup> All illness, both attended and not attended by doctors.

<sup>4</sup> Calls in connection with illness except that clinic care includes also calls for immunization, well-baby care, and health (including school) examination.

There is some variation in the different geographic sections in the illness rate per 1,000 population, but the variation in the volume of medical care is much greater than can be explained by differences in illness rates. In calls by all practitioners per 1,000 population, the only large variation in the different regions is for California, which showed a 19 percent excess over the rate for all regions combined. This high rate for California is accounted for by calls to clinics and to nonmedical practitioners; calls to private physicians are about the same in California as in the other regions. The rate of clinic calls (including services to the well and the sick) per 1,000 surveyed population in California was 72 percent above that for all sections combined, with New York second, with a rate that was 47 percent above the figure for all regions. The North Central and South were low in clinic calls, their rates being 18 and 28 percent, respectively, below

<sup>18</sup> See table 2 for the city-size classes used



that for all sections. The California rate for calls by nonmedical practitioners shows an excess of 130 percent over the rate for all regions, being more than twice as high as the next highest section, the North Central, which was 11 percent above the rate for all regions. New York State and the South had low rates for nonmedical calls, 33 and 62 percent, respectively, below the rate for all sections combined.

*Family income and the volume of medical care.*—Home, office, and clinic calls on account of illness per 1,000 population are about twice as frequent among families with annual incomes of \$5,000 or over as among those with less than \$1,200 annual income (16, p. 283). Calls by nonmedical practitioners, although small for all groups, show an even greater relative increase with income than calls by physicians, the income group above \$5,000 having about three times as many such calls per 1,000 population as the lowest income group, under \$1,200 per year. Thus, those able to pay are more largely the patrons of the nonmedical practitioners such as osteopaths, chiropractors, and faith healers. Clinic calls, on the other hand, are quite largely concentrated in the low income groups; the rate for clinic calls per 1,000 persons among families with \$5,000 or more income was only one-fourth of that for families with less than \$1,200 income.<sup>19</sup> In clinic calls, as in calls by physicians and nonmedical practitioners, the intervening income groups have rates falling logically between the extremes here quoted.

The excess in the volume of medical care received by the higher income groups is due in large part to a higher proportion of cases being attended by a doctor but in part to a higher average number of calls per attended case. In the lowest income group, 66 percent of the cases were attended by some practitioner, as compared with 90 percent for families with \$5,000 or more income. The average number of calls per total case was 66 percent higher, and the average calls per attended case 22 percent higher for the group with incomes of \$5,000 or over than for families with less than \$1,200 annual income.<sup>20</sup>

#### IV. DISTRIBUTION OF DOCTORS' CASE AND CALL LOADS ACCORDING TO DIAGNOSIS

The relative frequency of the different diagnosis groups among the cases that consult a doctor is of interest. From the point of view of the doctor, this distribution gives a picture of the diagnosis distribution of his case load. However, the distribution of cases is different

<sup>19</sup> The concentration of clinic calls in low income families would be even greater if private group clinics were excluded and the tabulation limited to public clinics.

<sup>20</sup> The report of the Committee on the Costs of Medical Care considers in great detail the relationship of family income to the volume of medical care; further data may be found in that report (16).

from the distribution of calls, because some diseases require more calls than others.

Figure 3 shows first such distributions for cases and calls for all types of practitioners combined. The diseases<sup>21</sup> designated as "minor" respiratory constituted 27 percent of all cases attended by any type of practitioner and received 15 percent of all calls to or by

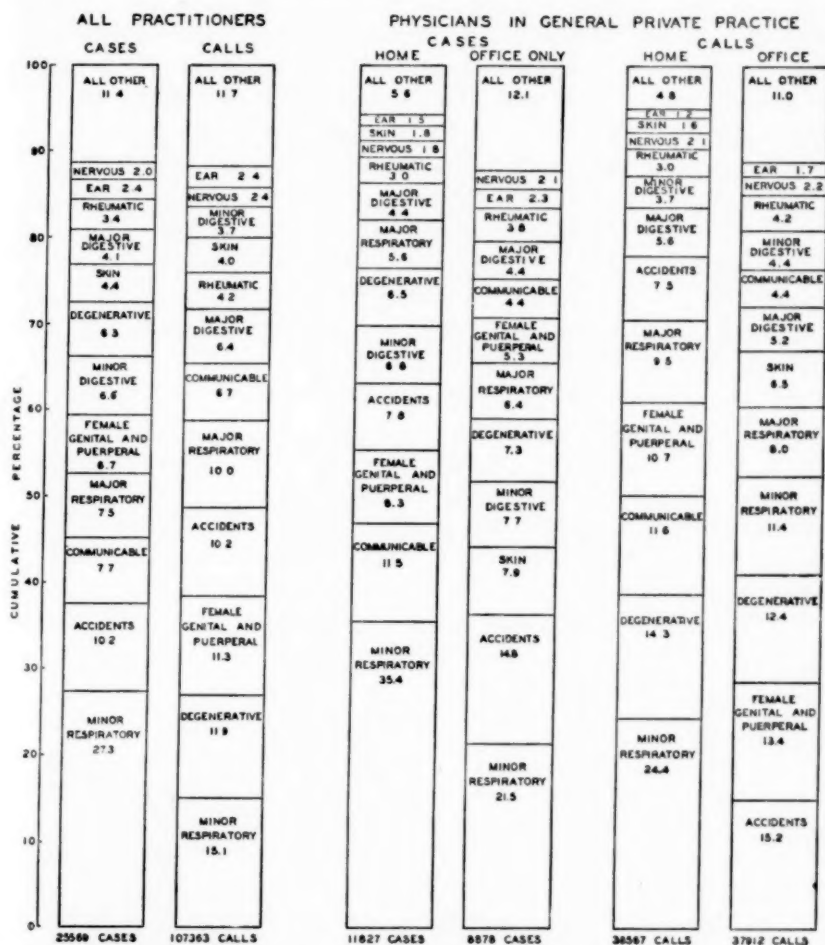


FIGURE 3.—Distribution of attended cases and of doctors' calls according to broad disease groups for the whole practice of all types of healers and for the home as compared with the office practice of private general physicians—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31. (Based on age-adjusted rates in Appendix tables.)

those practitioners. In terms of attended cases, accidental injuries were second, with 10 percent, and the calls on such cases were also 10 percent of the total; however, accidents were exceeded in calls by the

<sup>21</sup> The diagnosis group names give a general idea of the types of diseases included; for details see Appendix table 5 and its footnotes. Figures 1 and 2 of a preceding paper (16) show graphically the make-up of each group in terms of the frequency of specific diagnoses and the average duration in terms of days in bed.

degenerative diseases (12 percent of calls) which were seventh in frequency of attended cases (6 percent), and also by female genital and puerperal diagnoses (11 percent of calls) which were fifth in attended cases (7 percent). Communicable diseases were third in frequency of attended cases (8 percent) but sixth in doctors' calls (7 percent).

*Relative importance of different diagnoses in home and office practice.*—Of perhaps more interest than the total practice is the distribution according to diagnosis of cases and calls to the home as compared with the office practice of doctors. In this study this distinction was made only for private physicians not designated as specialists, so the comparison will be limited to these general medical practitioners; the cases of such doctors constituted 81 percent of all cases attended by any practitioner, and 72 percent of all calls.

In these data, office cases include only those with all attendance at the office of the physician; office calls, however, include all calls at the office of the physician even though the patient had other calls at home or in a hospital. Home calls include all in which a private physician went to the patient, usually at home but occasionally in a hospital. Figure 3 shows the diagnosis distribution of the case and call loads of the private physician in home and office practice. It is surprising to find that minor respiratory diseases make up 35 percent of all cases with home calls; communicable diseases (11 percent) and female genital and puerperal diagnoses (8 percent) are second and third in frequency. Apparently a home call on a case does not necessarily mean that it is serious or of long duration, but rather that, at the particular time, it was inadvisable for the patient to go to the doctor's office; the inadvisability of such a trip may have been due to the condition of the patient, as in respiratory or puerperal illness, or to the communicable nature of the disease. Of the cases that had office calls only, minor respiratory is also the most frequent diagnosis, 21 percent, as compared with 35 percent for minor respiratory in home cases. The next most frequent diagnoses are quite different from those for home cases; accidental injuries are second in office cases (15 percent), skin diseases third (8 percent), and minor digestive disorders fourth (8 percent). Accidental injuries ranked fourth among home cases (8 percent), skin diseases ranked eleventh (2 percent), and minor digestive disorders fifth (7 percent).

The diagnosis distribution of calls perhaps gives a better index of the office as compared with the home practice of physicians. Of all home calls, minor respiratory diseases received the largest proportion, 24 percent, but among the office calls this diagnosis was fourth in frequency, with 11 percent. The diagnosis that received the largest proportion of office calls was accidental injuries, with 15 percent; in terms of home calls, accidental injuries was sixth, with 7 percent.

The second most frequent group for office calls is female genital and puerperal diagnoses, with 13 percent, as compared with fourth position in the proportion of home calls, with 11 percent; it must be remembered that prenatal calls to the doctor were tabulated as a part of the service received on a maternity case, which procedure probably accounts for the large number of office calls for this diagnosis group. The degenerative diseases are third in office calls (12 percent), and second in home calls (14 percent).

*Relative importance of different diagnoses in various types of medical and nonmedical practice.*—In this study the type of attendant was recorded in considerable detail; data are available, therefore, for comparing the diagnosis distribution of cases and calls not only for general medical practitioners but also for medical specialists, private and public clinics, osteopaths, chiropractors, and other nonmedical practitioners. Because of the small number of cases attended by some of these practitioners, it was impracticable to build up adjusted rates for each diagnosis group; the rates in table 4 and the percentages in figures 4 and 5 are based on actual cases and calls with no adjustment for the fact that the surveyed group contains an excess of children and young married adults and a deficiency of old people. Therefore, the data in these figures are not strictly comparable with those in figures 3 and 6, which are based on adjusted rates.

Figure 4 shows for each type of practitioner the proportion of his cases that were in each broad diagnosis group, and figure 5 shows the proportion of calls that were made in connection with the same diagnosis groups. Private physicians not designated as specialists attended 81 percent of all cases and made 72 percent of all calls in connection with illness, so the diagnosis distribution of their cases may be examined first. Of the cases attended by these general practitioners, 30 percent were minor respiratory diseases and 19 percent of their calls were devoted to such cases. The next diagnoses in order of case frequency are accidental injuries (11 percent), communicable diseases (11 percent), minor digestive (7 percent), major respiratory (6 percent), and female genital and puerperal (6 percent). In terms of calls, minor respiratory diseases (19 percent), and accidental injuries (11 percent) remain first and second, but female genital and puerperal (11 percent) is third, communicable diseases (10 percent) fourth, and degenerative diseases (9 percent), fifth.

The diagnosis distribution of cases attended by private group clinics (fig. 4) is fairly similar to those attended by general practitioners; the chief difference is a smaller percentage of communicable diseases and a larger percentage of skin diseases. The distribution of private group clinic calls (fig. 5) is less similar to general practitioners' calls, but roughly it bears out the above observations about cases.

Public clinics handled fewer minor respiratory and communicable cases and more major respiratory (including respiratory tuberculosis, tonsillectomy, pneumonia, sinusitis, and chronic nasal affections), female genital and puerperal, and accident cases than was true of private general practitioners. In terms of calls, major respiratory (15 percent), female genital and puerperal (13 percent), and communicable (12 percent), were the three most important groups.

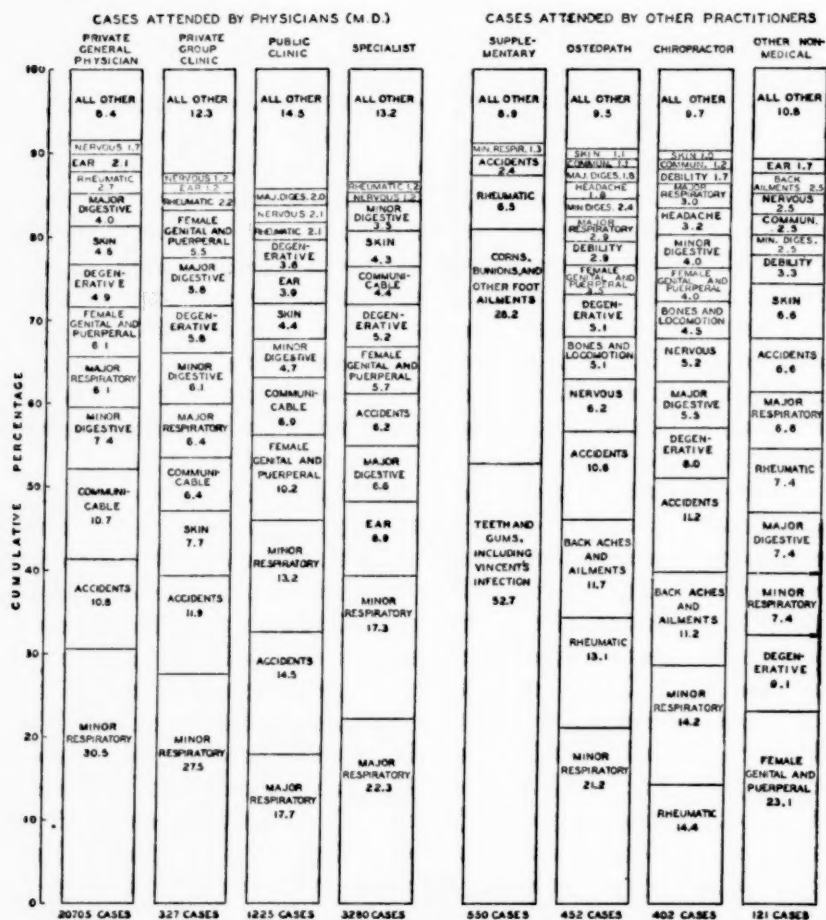


FIGURE 4.—Distribution of cases attended by different types of practitioners according to broad disease groups—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31. (Based on actual cases of all ages with no adjustment for age.)

Among medical specialists of all kinds, 22 percent of the cases were major respiratory, with 17 percent in the minor respiratory group (fig. 4). Next come ear and mastoid (9 percent), major digestive (7 percent), and accidental injuries (6 percent). In terms of calls (fig. 5), major respiratory diseases had 22 percent of the total specialist calls, major digestive, 11 percent, minor respiratory, 11 percent, female



genital and puerperal, 8 percent, and ear and mastoid, 9 percent. In the practice of specialists, major respiratory, major digestive, and ear and mastoid diseases rank considerably higher than in the other types of medical practice that have been examined.

Supplementary practitioners as here used include dentists, chiropractors, and physiotherapists, that is, subspecialties which supplement the work of physicians in the care of illness in a community. It must

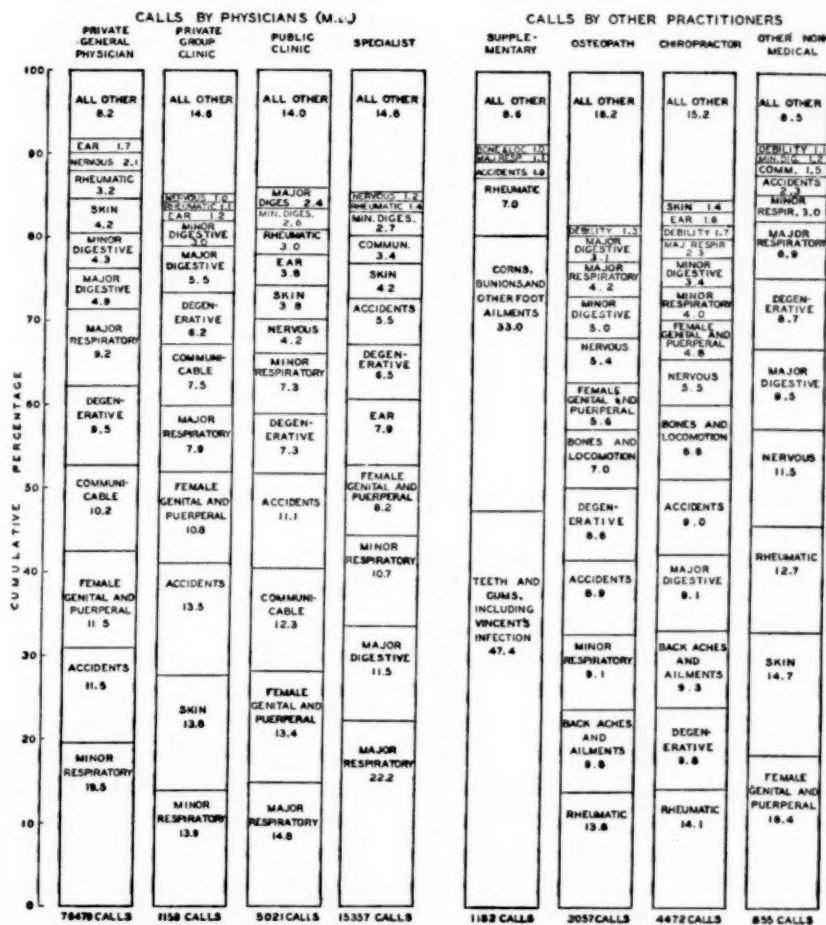


FIGURE 5.—Distribution of calls by different types of practitioners according to broad disease groups—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31. (Based on actual calls on cases of all ages with no adjustment for age.)

be remembered that the only care here considered is that in connection with illness. Of the total of 550 illnesses attended by these practitioners, 356, or 65 percent, were attended by dentists,<sup>22</sup> 163, or 30

<sup>22</sup> These 356 illnesses attended by dentists are only a small percentage of the total of 10,116 cases of dental care in these families, largely without illness in the usual sense. See preceding paper for details on all dental care (15). Of the 356 illnesses treated by dentists, 119 cases had a physician and 4 had a nonmedical practitioner in attendance also.

percent, by chiropodists, 28, or 5 percent, by physiotherapists (without the supervision of a physician), and 3, or 0.5 percent, by optometrists. Since it is a miscellaneous group, the diagnosis distribution is quite different from preceding distributions. Because of the frequency of certain diagnoses for supplementary practitioners, two new classes have been used: Teeth and gums, including Vincent's infection; and corns, bunions, and other foot ailments. For other nonmedical practitioners, the following diagnoses are shown separately for the same reasons of exceptional frequency: backaches and back ailments; affections of the bones, joints, and other organs of locomotion; headache; and debility. These groups are shown in the bars in figures 4 and 5 if they include 2 percent or more of the total cases or calls.

Illnesses associated primarily with the teeth and gums and treated by dentists constitute 53 percent of the cases and are estimated to cause 47 percent of the calls in connection with *illness* treated by the supplementary practitioner group (figs. 4 and 5). But the dentist's care of illness is important in other categories also. Of the illnesses from rheumatic diseases (including neuralgia and neuritis) that were treated by the supplementary group, three-fourths were dentists' cases, presumably for the treatment or extraction of teeth suspected of being foci of infection responsible for the arthritis or neuritis; the other one-fourth were treated by physiotherapists. Accidental injuries are also treated in dental practice, presumably to repair damage done to the teeth.

Chiropodists' cases of corns, bunions, and other foot ailments constituted 28 percent of the cases and 33 percent of the calls of the supplementary practitioner group.

Osteopaths' cases (fig. 4) tend to be concentrated in a few diagnoses, minor respiratory (21 percent), rheumatic diseases (13 percent), backaches and back ailments (12 percent), and accidents (11 percent). In terms of calls (fig. 5), rheumatic diseases is first (14 percent), followed by backaches and back ailments (10 percent), minor respiratory (9 percent), accidents (9 percent), and degenerative diseases (9 percent).

Chiropractors' cases are somewhat more scattered over the various diagnosis groups. Rheumatic diseases, with 14 percent of the cases and the same percentage of the calls, is first, followed by minor respiratory, with 14 percent of the cases, backaches and back ailments (11 percent), and accidents (11 percent). In terms of calls, degenerative diseases (10 percent), are second to rheumatic diseases; the next four diagnoses, backaches and back ailments, major digestive diseases, accidents, and diseases of the bones and organs of locomotion are each responsible for 9 percent of the calls.

The miscellaneous other nonmedical practitioners include Christian Science and other faith healers, naturopath, midwife, and others.

Only 121 cases were reported as treated by this type of practitioner; 22 of these, or 18 percent, were births and all were attended by midwives. In terms of calls, also, female genital and puerperal is the largest group.

The lack of definite diagnoses for illnesses treated only by non-medical practitioners tends to increase the number of ill-defined cases; in spite of this tendency the picture seems reasonably true, namely, that it is the various rheumatic and other indefinite chronic pains that bring the patient to a nonmedical practitioner. Aside from this, sprains and other cases where massage therapy is commonly applied also fall into the hands of such practitioners.

Table 4 also shows for each type of practitioner and for each broad diagnosis, the average calls per case attended. For all causes of illness, average calls per attended case of 3.7 for general medical practitioners, 3.5 for private group clinics, 4.1 for public clinics, and 4.7 for medical specialists may be contrasted with average calls per attended case of 6.8 for osteopaths, 11.1 for chiropractors, and 7.1 for other nonmedical practitioners.<sup>23</sup>

#### V. FREQUENCY AND VOLUME OF DOCTORS' CARE OF MALES AND FEMALES FOR BROAD DISEASE GROUPS

The relative importance of different broad diagnosis groups in terms of attended cases and doctors' calls for various kinds of practitioners has been discussed. For all practitioners and for patients of both sexes combined (fig. 3), minor respiratory diseases were by far the most frequent diagnosis for attended cases; in terms of calls by any practitioner the minor respiratory diseases were less overwhelmingly important, the degenerative diseases being a fairly close second, and female genital and puerperal diagnoses having almost as many calls per 1,000 persons of both sexes as the degenerative diseases.

*Relative importance for males and females of different diagnoses in attended cases and doctors' calls.*—Figure 6 compares males and females with respect to the percentage of all attended cases and of all doctors' calls that were made in connection with the various broad diagnosis groups. Among males, minor respiratory diseases constituted 29 percent of the attended cases, with accidents (15 percent) and communicable diseases (9 percent) as the second and third most frequent types of case. Among females the minor respiratory diseases constituted 26 percent of the attended cases, with female genital (11 percent) as the second cause, followed by accidents (7 percent), and communicable diseases (7 percent).

<sup>23</sup> These figures on calls per case are based on actual cases and calls and not on rates corrected for age, as in some of the other tables.

TABLE 4.—*Rates<sup>1</sup> per 1,000 total population for illnesses attended and calls by each type of practitioner, by broad diagnosis groups—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31*

(Sole or primary diagnoses only)

Diagnosis <sup>2</sup> group	Physician (M. D.)					Supple- mentary <sup>3</sup> practitioner	Nonmedical practitioner		
	Any physician or clinic (all M. D.)	Private gen- eral <sup>3</sup> physician	Spec- ial- ist <sup>4</sup>	Priv- ate group clinic	Public clinic		Osteo- path	Chiro- prac- tor	Other <sup>5</sup> non- medical practitioner
Attended cases per 1,000 population during year									
All causes.....	634	537	85.1	8.48	31.78	14.27	11.73	10.43	3.14
Minor respiratory diseases.....	185	164	14.7	2.33	4.20	7.18	2.49	1.48	7.23
Other respiratory diseases.....	51	33	19.0	.54	5.63	4.67	.34	.31	7.21
Minor digestive diseases.....	45	40	2.9	.52	1.48	7.05	.29	.42	7.08
Other digestive diseases.....	24	21	5.6	.49	.65	7.08	7.21	.57	7.23
Communicable diseases.....	64	58	3.7	.54	2.18	7.08	7.13	7.13	7.08
Ear and mastoid diseases.....	17	11	7.6	7.10	1.22	7.05	7.05	7.08	7.05
Nervous diseases except cerebral hemorrhage, paralysis, neu- ralgia, and neuritis.....	11	9	1.1	7.10	.67	7.08	.73	.54	7.08
Rheumatism and related dis- eases.....	16	14	1.0	7.18	.67	.93	1.53	1.50	7.23
Degenerative diseases.....	30	26	4.5	.49	1.19	7.05	.60	.62	.29
Skin diseases.....	29	25	3.7	.65	1.40	8.88	7.13	7.10	7.21
Female genital and puerperal diagnoses.....	38	33	4.9	.47	3.24	-----	.42	.42	.73
Accidental injuries.....	65	58	5.2	1.01	4.62	.34	1.25	1.17	7.21
All other diseases.....	59	45	11.3	1.04	4.62	* 10.87	* 3.58	* 3.09	* 5.52
Annual calls per 1,000 population									
All causes.....	2,543	1,984	398.4	30.0	130.3	30.7	79.3	116.0	22.2
Minor respiratory diseases.....	444	388	42.8	4.2	9.4	7.3	7.2	4.6	7.7
Other respiratory diseases.....	293	183	88.3	2.4	19.3	* 5.8	3.3	2.7	7.15
Minor digestive diseases.....	101	86	10.9	.9	3.4	7.1	4.0	3.9	7.3
Other digestive diseases.....	148	98	45.8	1.7	3.1	7.1	7.25	10.6	7.21
Communicable diseases.....	234	202	13.4	2.3	16.0	7.2	7.3	7.8	7.3
Ear and mastoid diseases.....	72	35	31.4	7.4	4.9	7.1	7.4	7.19	7.1
Nervous diseases except cerebral hemorrhage, paralysis, neural- gia, and neuritis.....	51	41	4.6	7.3	5.5	7.3	4.3	6.4	7.25
Rheumatism and related diseases.....	73	63	5.4	7.3	3.9	2.2	10.9	16.4	7.28
Degenerative diseases.....	225	188	26.1	1.8	9.5	7.1	6.8	11.3	1.9
Skin diseases.....	109	83	16.9	4.1	5.0	* 2.0	7.2	7.17	7.33
Female genital and puerperal diagnoses.....	281	228	32.6	3.2	17.5	-----	4.5	5.6	4.1
Accidental injuries.....	269	229	22.1	4.0	14.5	.6	7.1	10.5	7.5
All other diseases.....	243	162	58.3	4.4	18.3	* 19.0	* 27.8	* 39.7	* 2.0
Mean calls per case attended									
All causes.....	4.0	3.7	4.7	3.5	4.1	2.1	6.8	11.1	7.1
Minor respiratory diseases.....	2.4	2.4	2.9	1.8	2.2	(7)	2.9	3.1	(7)
Other respiratory diseases.....	5.8	5.5	4.6	4.3	3.4	8.6	9.8	8.6	(7)
Minor digestive diseases.....	2.2	2.2	3.7	1.7	2.3	(7)	14.0	9.4	(7)
Other digestive diseases.....	6.2	4.6	8.2	3.4	4.7	(7)	(7)	18.5	(7)
Communicable diseases.....	3.6	3.5	3.6	4.1	7.3	(7)	(7)	(7)	(7)
Ear and mastoid diseases.....	4.1	3.1	4.1	(7)	4.0	(7)	(7)	(7)	(7)
Nervous diseases except cerebral hemorrhage, paralysis, neu- ralgia, and neuritis.....	4.7	4.4	4.3	(7)	8.2	(7)	5.9	11.7	(7)
Rheumatism and related diseases.....	4.6	4.3	5.3	(7)	5.8	2.3	7.2	10.9	(7)
Degenerative diseases.....	7.6	7.2	5.8	3.7	7.9	(7)	11.4	18.2	6.7
Skin diseases.....	3.8	3.4	4.6	6.4	3.6	2.3	(7)	(7)	(7)
Female genital and puerperal diagnoses.....	7.5	7.0	6.7	6.9	5.4	(7)	10.7	13.4	5.6
Accidental injuries.....	4.1	3.9	4.2	4.0	3.1	1.8	5.7	9.0	(7)
All other diseases.....	4.1	3.6	5.2	4.2	4.0	1.7	7.8	12.9	3.9

See footnotes at end of table.

TABLE 4.—Rates per 1,000 total population for illnesses attended and calls by each type of practitioner, by broad diagnosis groups—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31—Continued

Diagnosis group	Physician (M. D.)					Supple- men- tary practi- tioner	Nonmedical practitioner		
	Any physi- cian or clinic (all M. D.)	Private gen- eral physi- cian	Spe- cial- ist	Pri- vate group clinic	Public clinic		Osteo- path	Chiro- prac- tor	Other non- medical practi- tioner
	Number of cases and calls								
Cases, all causes.....	24,432	20,705	3,280	327	1,225	550	452	402	121
Calls, all causes.....	98,013	76,479	15,357	1,156	5,021	1,182	3,057	4,472	855

<sup>1</sup> Crude rates with no adjustment for age. See note 1 of table 1 for definitions of cases and attendance.

When one case had two types of attendant, it is counted for both, but total cases for all physicians (M. D.) is an unduplicated count of those attended by one or more physicians.

Sums of case and call rates for the different types of nonmedical practitioners in this table will not add to totals for nonmedical practitioners in table 1 because: (a) Dentists are not included in the nonmedical group in table 1, but chiropodists are included. (b) Cases with two kinds of nonmedical practitioners would count in this table for both practitioners, but would count only once in table 1. (c) Attended cases with an unknown number of calls were used in this table as having the average calls for the same detailed diagnosis attended by the same type of practitioner, but in table 1 they were put in at broad group averages for the several types of practitioners combined. Except for dentists (for whom calls were not recorded), the numbers of attended cases with unknown numbers of calls were relatively few, but they account for small discrepancies in total numbers of calls.

<sup>2</sup> For International List numbers, see table 5. For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> Private general physicians (M. D.) are those not designated by family informants as specialists; attendance may have been in office, home, or upon a private patient in a hospital.

<sup>4</sup> Specialist here refers to a physician so designated by the family informant, regardless of listing in any directory of physicians. A few cases and calls by specialists in clinics are included here and in clinics also (2.0 and 1.7 calls for all diagnoses per 1,000 population for public and private clinics, respectively).

<sup>5</sup> Supplementary practitioner includes dentist, chiropodist, physiotherapist, and optometrist.

<sup>6</sup> Other nonmedical practitioners include Christian Science or other faith healer, naturopath, midwife, and a few miscellaneous others.

<sup>7</sup> Less than 10 attended cases; mean calls per case not computed.

<sup>8</sup> For supplementary practitioners, the following diagnoses included in various broad groups occur frequently:

	Percent of all—		Classified as—
	Cases	Calls	
For dentists:			
Teeth and gums.....	48.9	29.6	All other diseases.
Vincent's angina.....	3.8	17.8	Other respiratory diseases.
For chiropodists:			
Corns and ingrowing nails.....	5.5	5.7	Skin diseases.
Bunions and fallen arches.....	4.7	7.2	All other diseases.
Other foot trouble.....	18.0	20.1	All other diseases.

<sup>9</sup> For osteopaths, chiropractors, and other nonmedical practitioners, the following diagnoses included with "all other diseases" occur frequently:

	Osteopath Percent of all—		Chiropractor Percent of all—		Other nonmedical Percent of all—	
	Cases	Calls	Cases	Calls	Cases	Calls
Backaches and back ailments.....	11.7	9.8	11.2	9.3	2.4	0.9
Headache.....	1.8	.9	3.2	.8	-----	-----
Bones, joints, and locomotion.....	5.1	7.0	4.5	8.8	-----	-----
Debility.....	2.9	1.3	1.7	1.7	3.1	1.0



In terms of calls (fig. 6), minor respiratory diseases received 17 percent of all calls for males, with accidental injuries second (16 percent), followed by other respiratory (12 percent), and degenerative diseases (12 percent). Among females, the female genital and puerperal diagnoses received the greatest number of calls, 18 percent of the total, followed by minor respiratory (14 percent), degenerative (12 percent), and major respiratory diseases (9 percent).

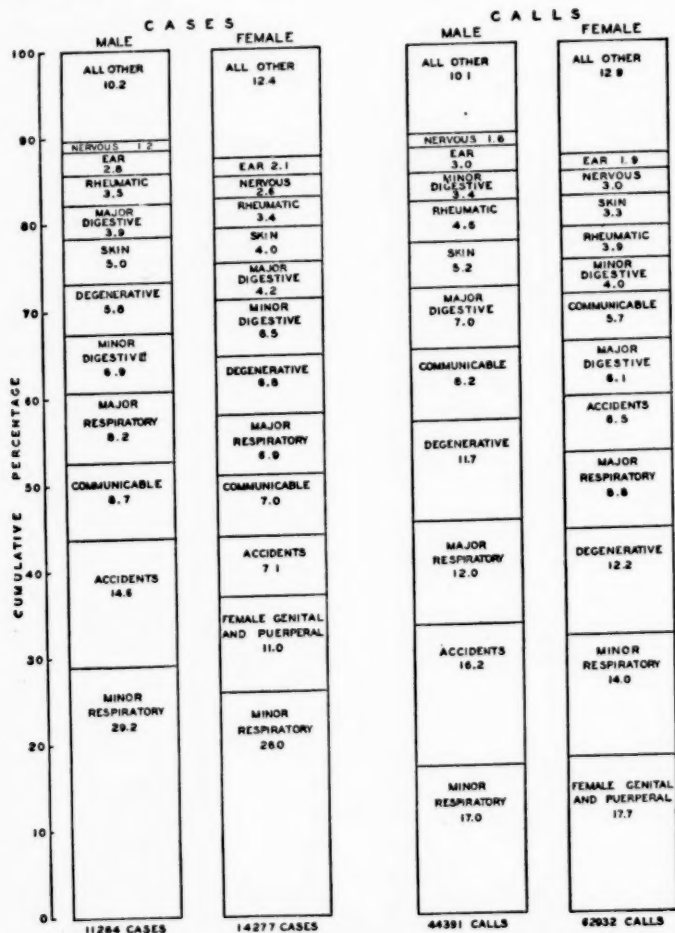


FIGURE 6.—Distribution for males and females of attended cases and calls by all practitioners according to broad disease groups—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31. (Based on age-adjusted rates in Appendix tables 5 and 8.)

*Frequency of attended cases and volume of doctors' calls at specific ages for each sex.*—The comparison of the frequency of attended cases and of doctors' calls upon illness from all causes which was discussed in a preceding section may be extended to cases of the various diagnoses. Figures 7 and 8 show several types of rates for males and

females of specific ages, namely, (a) attended cases per 1,000 population, (b) total doctors' calls per 1,000 population, (c) home calls by private general physicians per 1,000 population, and (d) total calls per attended case. Appendix tables 5, 8, 10, and 11 show the data plotted in figures 7 and 8; appendix tables 6 and 9 show similar data for cases and calls by private physicians not designated as specialists; and table 7 shows cases attended at home by these private general physicians.

In terms of attended cases per 1,000 persons, the rates are almost invariably higher for women than for men. Of the total cases reported in the whole study, 77 percent of those among males and 79 percent of those among females were attended by a physician or other practitioner (table 1); so that the rates for attended cases reflect quite largely the same differences between the sexes that were noted for all cases in a preceding paper (14).

The percentage of cases of all ages that were attended by a doctor ranges in the 13 broad diagnosis groups from 64 for minor respiratory diseases to 95 for degenerative diseases and 97 percent for female genital and puerperal diagnoses. In every one of the 12 diagnosis groups common to the two sexes, the percentage of cases attended by a doctor is nearly the same for males and females; the actual differences between the percentages range from zero for communicable diseases to 4.5 for rheumatic diseases.<sup>24</sup> Thus, the generally higher incidence of attended cases among women than among men which is seen in figures 7 and 8 reflects more illness among women rather than more frequent medical attendance upon the same amount of illness. The same factor is reflected to a considerable extent in total calls and home calls per 1,000 population; it is seen also in figures 7 and 8 that the average calls per attended case do not differ greatly as between the sexes in any of the diagnosis groups.

Similarly, the age curves in these charts for attended cases and calls per 1,000 population reflect largely the age incidence (14) of the various diagnoses rather than variation with age in the proportion of cases attended or in doctors' calls per case. Thus, for most of the diagnosis groups there is less age variation in calls per attended case than in the incidence of attended cases or the volume of either total or home calls per 1,000 population.

A detailed discussion of the curves in figures 7 and 8 does not seem necessary, but a few exceptions to the general rules pointed out above may be noted. (a) In the minor respiratory diseases the home calls per 1,000 adult women show a larger relative excess over those for

<sup>24</sup> The percentage of cases attended by a doctor is given by age and sex for all diagnoses in table 1. While the percentages are not given for the diagnosis groups, they can be obtained by age and sex by relating the rates for attended cases in Appendix table 5 of this paper to corresponding rates for all cases in Appendix table 7 of a preceding paper (14).

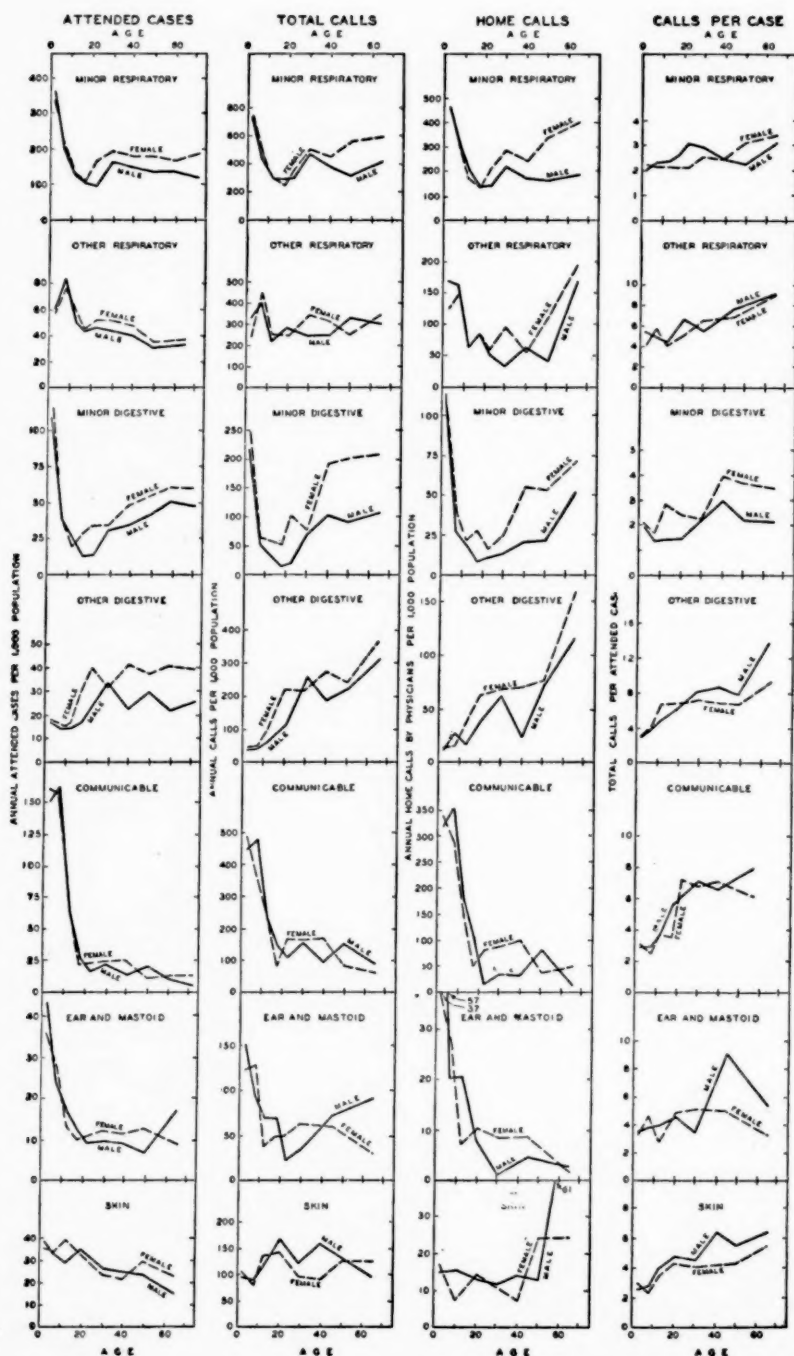


FIGURE 7.—Age and sex variation in attended cases and doctors' calls for illness from broad disease groups, as measured by various types of rates—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31. (Scales are so made that the adjusted rate for all ages of both sexes represents an interval on the vertical rate scale that corresponds to 30 years on the horizontal age scale. Rates are given in Appendix tables 5-11, with footnotes for broader age groups used in some of the graphs.)

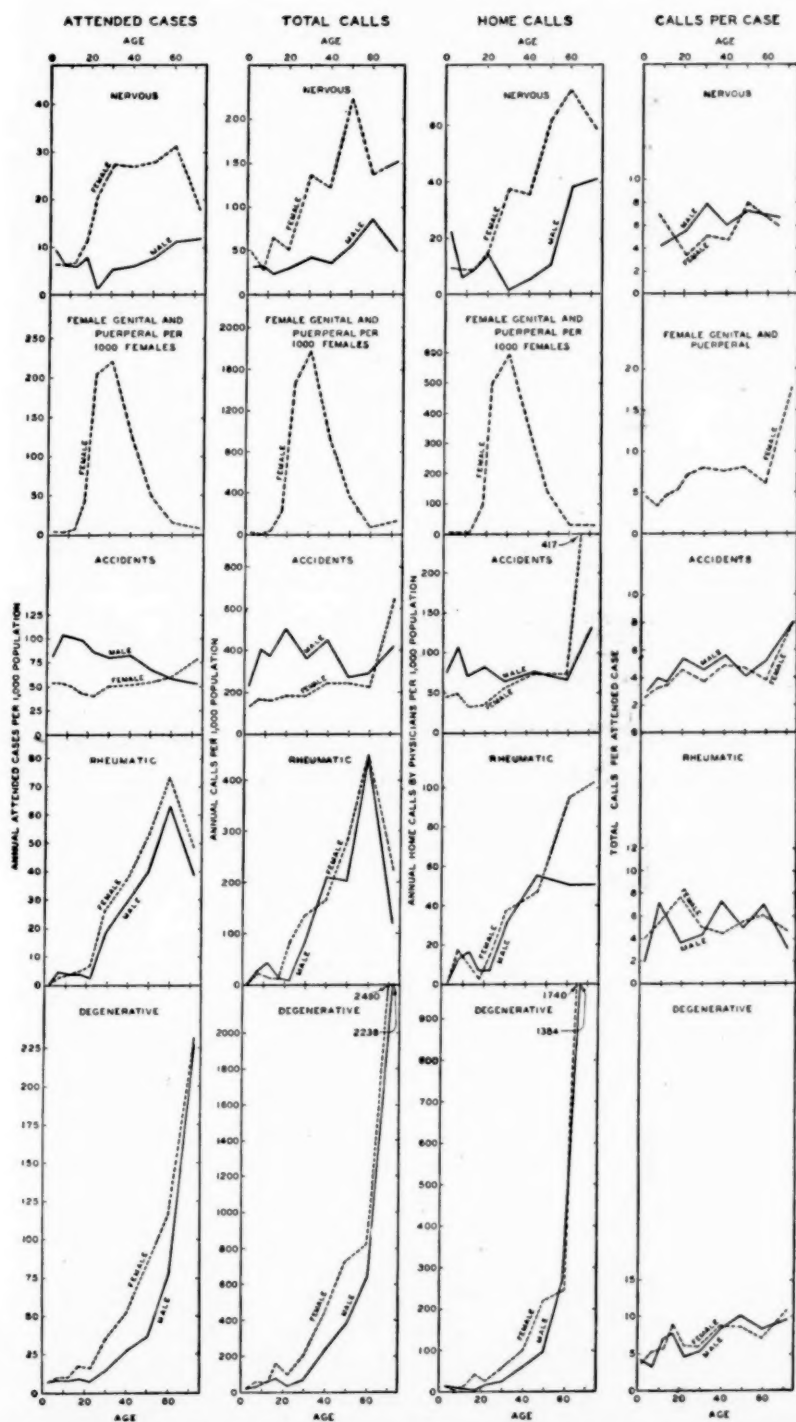


FIGURE 8.—Age and sex variation in attended cases and doctors' calls for illness from broad disease groups (continued).

men than do the total calls or the attended cases. (b) The total and home calls on adult women for minor digestive diseases show a larger relative excess over those for men than does the incidence of these diagnoses (14). (c) Home calls per 1,000 for minor digestive diseases among children under 5 years and for persons over 55 years of age are relatively greater than is the incidence of attended cases at these ages. (d) The calls per attended case of communicable disease are definitely greater for persons over 20 years of age than for children under 15. This rise with age may be due in part to a greater severity of some communicable diseases among adults, and in part to the changing character of the diseases included in the group; that is, in the adult ages the common childhood diseases would constitute a smaller proportion of the total cases classified as communicable than would be true in the younger ages.

As in total incidence and days of sickness, the nervous diseases show the largest differences between the sexes with respect to attended cases and with respect to total and home calls per 1,000 persons under observation. However, the calls per attended case were not greatly different for the two sexes.

#### VI. SUMMARY

Data on the frequency of illness and the volume of medical care received were recorded for a 12-month period between 1928 and 1931 by periodic canvasses of 8,758 white families in 130 localities in 18 States. The visits were made at intervals of 2 to 4 months. Illnesses causing symptoms that lasted for one day or longer within the study year were recorded, together with the number of doctors' calls on the case.

The surveyed families include representation from nearly all geographic sections, from rural, urban, and metropolitan areas, from all income classes, and of both native and foreign-born persons.

The recorded illness from all causes amounted to 823 cases per 1,000 persons. Of the total cases, 79 percent were attended by some type of practitioner, a rate of 647 attended cases per 1,000 population. There were 4.6 calls by all practitioners per attended case, with a total of 2,949 calls during the year per 1,000 canvassed population. Of the total attended cases, 81 percent were attended by physicians in general practice, and these doctors made 72 percent of the total calls. Of the 526 cases per 1,000 population that were attended by physicians in general practice, 294 per 1,000 had one or more home calls, the other 232 having office calls only. Fifty-six percent of these cases had home calls and 50 percent of the total calls by these physicians were home calls.

Of the total attended cases, 12 percent had a physician who was designated by the family as a specialist; these specialists made 14 per-



cent of the total calls. Of the total attended cases 5 percent were attended by public clinics and another 1 percent by private group clinics. Supplementary practitioners such as dentists and chiropodists and nonmedical practitioners such as osteopaths and chiropractors attended 5 percent of all attended illnesses, but their calls amounted to 9 percent of the total calls.<sup>25</sup>

The age curves of attended cases and calls per 1,000 population vary considerably for different types of practitioners, and for home as compared with office attendance. Considering total cases and calls by all practitioners there is a large excess in the rates per 1,000 for adult women over adult men of corresponding ages, even when female genital and puerperal diagnoses are excluded (figs. 1 and 2). This excess is due to more illness rather than to more doctors' calls per case.

The volume of medical care in terms of doctors' calls per 1,000 population is greater in large cities than in small towns and rural areas; and there is some geographic variation also. Striking geographic differences occur in the extent of care by nonmedical practitioners and by clinics; the West, as represented by California, stands at the top in nonmedical practice and also in clinic practice, with New York State second in clinic practice but below the average in nonmedical practice.

These data afford interesting indications of the diagnosis distribution of the practice of different types of doctors. For all practitioners, 27 percent of the cases and 15 percent of the calls are due to minor respiratory diseases, that being the most frequent category. In home practice, the minor respiratory diseases are even more important, constituting 35 percent of all cases with a home call and 24 percent of the total home calls. In terms of office calls, however, the minor respiratory diseases are fourth in frequency, being out-ranked by accidental injuries, female genital and puerperal diagnoses, and the degenerative diseases of old age (fig. 3).

The diagnosis distribution of cases and calls varies markedly as between physicians and nonmedical practitioners such as osteopaths and chiropractors (figs. 4 and 5).

The age curves and the differences between the sexes in attended cases and doctors' calls per 1,000 population for the several diagnosis groups reflect differences in incidence more than differences in the extent of medical care. In other words, there is less variation with age and less variation between the sexes in the number of doctors' calls per attended case than in the number of attended cases and calls per 1,000 population (figs. 7 and 8).

<sup>25</sup> Since some of the cases had more than one type of attendant, the sum of the above percentages of cases amounts to more than 100 percent.

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## VIII. APPENDIX

TABLE 5.—*Illnesses from certain causes attended by any practitioner<sup>1</sup> per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31*

[Sole or primary diagnoses only]

Sex and diagnosis <sup>2</sup> group with International List numbers, 1920 revision	All ages <sup>3</sup>			Age <sup>4</sup>									
	Number of at- tended cases	Adjusted <sup>4</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
		Cases <sup>1</sup> attended by any practitioner per 1,000 population during year											
Minor respiratory diseases (11, pt. 97, 98, 99, pt. 107, pt. 109):	7,283	176.3	188.9	352.4	202.4	131.6	112.1	139.2	183.3	166.6	157.3	152.1	157.3
Both sexes .....	3,406	163.1	180.2	366.8	195.0	126.9	110.0	99.6	166.5	151.7	138.8	139.3	121.3
Male .....	3,875	188.2	197.4	339.4	209.7	136.3	114.2	168.2	195.8	181.6	179.9	167.4	185.4
Female .....													
Other respiratory diseases (31, pt. 97, 100-106, pt. 107, pt. 109):	1,991	48.2	51.7	58.6	79.8	53.9	43.0	49.1	47.9	43.2	32.2	35.3	34.1
Both sexes .....	943	46.1	49.9	59.5	83.3	50.0	42.6	45.9	43.3	39.9	29.8	39.8	20.6
Male .....	1,046	49.9	53.3	57.4	76.3	57.8	43.3	51.4	51.3	46.4	35.2	29.9	44.6
Female .....													
Minor digestive diseases (15, pt. 16, 112-114):	1,772	43.1	46.0	111.4	37.8	21.2	21.0	25.5	32.4	41.1	46.9	55.0	54.1
Both sexes .....	813	38.8	43.0	108.6	37.9	23.0	13.1	14.5	30.8	34.2	40.7	51.0	48.1
Male .....	959	47.3	48.9	115.1	37.7	19.4	28.9	33.5	33.7	48.1	54.4	59.8	58.8
Female .....													
Other digestive diseases (pt. 108, 110, 111, 115-127):	945	26.4	24.5	17.1	13.8	15.3	23.3	32.6	31.9	31.5	32.8	29.9	33.1
Both sexes .....	391	22.1	20.7	16.7	13.5	13.9	16.4	23.5	32.9	22.2	29.3	21.1	25.2
Male .....	554	30.6	28.2	17.5	14.2	16.8	30.2	39.2	31.2	41.0	37.2	40.4	39.2
Female .....													
Communicable diseases (1-10, 12-14, pt. 16, 17-30, 32-42):	2,496	49.5	64.8	154.0	159.8	63.9	24.3	20.3	22.7	18.9	16.4	11.5	9.0
Both sexes .....	1,224	48.5	64.8	150.3	162.1	62.1	26.9	16.8	22.1	14.1	20.6	11.2	4.6
Male .....	1,272	50.3	64.8	159.1	157.5	65.7	21.7	22.9	23.2	23.7	11.3	12.0	12.5
Female .....													
Ear and mastoid diseases (86):	676	15.3	17.5	39.5	25.7	15.1	11.1	9.9	11.0	10.1	9.3	15.6	9.0
Both sexes .....	337	15.4	17.8	43.1	24.1	16.9	12.4	8.9	9.6	8.7	6.5	19.9	11.4
Male .....	339	15.1	17.3	36.1	27.3	13.2	9.8	10.6	12.0	11.5	12.6	10.5	7.1
Female .....													
Nervous diseases except cerebral hemorrhage, paralysis, neural- gia, and neuritis (70-73, 76, 81, 84):	465	13.1	12.1	7.8	6.3	6.3	9.5	12.3	17.9	16.4	16.7	20.4	15.0
Both sexes .....	132	6.9	7.0	9.3	6.4	6.1	7.9	1.1	5.4	6.0	7.6	11.2	11.4
Male .....	333	18.9	17.0	6.3	6.2	6.6	11.2	20.4	27.2	26.8	27.9	31.4	17.8
Female .....													
Rheumatism and related dis- eases (51, 52, 82, pt. 158):	699	22.2	18.1	.4	4.0	3.7	4.3	4.7	23.2	32.9	45.4	67.9	44.1
Both sexes .....	307	19.5	16.2	.4	5.0	3.9	3.9	2.2	18.7	28.9	39.6	63.4	38.9
Male .....	392	24.7	20.0	.4	3.1	3.5	4.6	6.5	26.6	36.9	52.5	73.2	48.1
Female .....													

<sup>1</sup> Cases represent periods of illness classified according to the primary cause (for details about classification of causes, see a preceding paper (1)). Cases include those with prior onset that extended into the study year; attended cases include a few (0.4 percent) with all calls prior to the study year, and some hospital cases with no calls because all service was rendered in the hospital by the hospital staff.

Attended cases (disabling and nondisabling) include all attended by 1 or more practitioners, that is, physician, specialist, hospital, clinic, dentist (see notes to table 1), chiroprapist, osteopath, chiropractor, midwife, or other healer. Cases attended by nurse alone are not counted as attended in this study because her work is usually supervised by some other practitioner primarily responsible for the case.

<sup>2</sup> For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>4</sup> Rates in the form of cases or calls per 1,000 population are adjusted by the direct method to the age distribution of the white population of the death registration States in 1930 as a standard population; this population is given for specific ages in table 1 of a preceding paper (4). The adjustment method involves the weighting of the age specific rates for the canvassed population according to the age distribution of the standard population. The details of the process are given under the heading of "corrected death rates" in Pearl (17), pp. 269-271.

<sup>5</sup> Rates plotted in figures 7 and 8 as 15-24: Skin, male 35.1, female 33.1. Rates plotted as 55 and over: Other respiratory, male 33.0, female 36.6; ear and mastoid, male 16.9, female 8.9; skin, male 14.5, female 22.8.

TABLE 5.—*Illnesses from certain causes attended by any practitioner per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31—Continued*

Sex and diagnosis group with International List numbers, 1920 revision	All ages			Age									
	Number of at- tended cases	Adjusted	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Cases attended by any practitioner per 1,000 population during year													
<b>Degenerative diseases (43-50, 57, 74, 75, 83, 87-92, pt. 93, pt. 96, 128, 129, 130, pt. 131, 132, pt. 133, 135):</b>													
Both sexes .....	1,161	40.9	30.1	7.4	10.3	9.2	14.1	12.7	26.1	40.1	57.6	94.4	228.5
Male .....	435	32.6	23.0	7.5	9.9	8.3	9.8	7.8	14.2	27.5	36.9	75.9	226.5
Female .....	726	49.3	37.0	7.5	10.7	10.1	18.4	16.3	34.9	52.9	83.0	116.6	229.9
<b>Skin diseases (151-154, pt. 205):</b>													
Both sexes .....	1,146	28.4	29.7	37.2	33.4	34.2	40.3	25.0	25.0	23.4	26.3	14.3	25.1
Male .....	555	27.7	29.4	38.8	33.0	29.1	41.3	24.6	26.6	24.8	23.8	12.4	18.3
Female .....	591	29.1	30.1	35.8	33.9	39.3	39.4	25.3	23.8	22.0	29.2	16.4	30.3
<b>Female genital and puerperal diagnoses (137-150):</b>													
Both sexes .....	1,491	43.4	38.7	.9	.7	2.0	21.0	117.0	126.8	60.9	20.6	6.1	4.0
Female .....	1,491	79.6	76.0	1.9	1.4	4.0	42.0	202.4	220.8	122.3	45.8	13.5	7.1
<b>Accidental injuries (pt. 85, 165- 203):</b>													
Both sexes .....	2,595	66.0	67.3	66.0	77.7	74.9	69.2	58.0	62.2	66.1	60.3	58.4	67.1
Male .....	1,602	81.7	84.8	79.4	103.5	100.8	96.9	85.0	79.1	81.6	66.1	57.2	52.6
Female .....	993	51.2	50.6	52.5	52.5	48.5	41.4	38.4	49.7	50.5	53.1	59.8	78.4
<b>All other diseases (53-56, 58-69, pt. 85, pt. 93, 94, 95, pt. 96, pt. 108, pt. 131, pt. 133, 134, 136, 155-157, pt. 158, 159-164, 204, pt. 205):</b>													
Both sexes .....	2,849	73.8	73.9	102.3	53.7	48.4	50.2	60.4	79.4	82.6	91.3	86.2	79.2
Male .....	1,139	56.8	60.3	107.5	51.4	42.6	41.3	28.0	52.5	59.1	61.8	63.4	66.4
Female .....	1,706	89.8	86.9	96.1	56.0	54.3	59.1	84.1	99.4	106.4	127.5	113.6	89.1

TABLE 6.—*Illnesses from certain causes attended (in home or office) by private general<sup>1</sup> physicians per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31*

[Sole or primary diagnoses only]

Sex and diagnosis <sup>2</sup> group	All ages <sup>3</sup>			Age									
	Number of cases attended by physicians	Adjusted <sup>4</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Cases attended by private general <sup>1</sup> physicians per 1,000 population during year													
Minor respiratory diseases:													
Both sexes.....	6,314	154.1	163.8	293.3	174.8	116.5	99.7	126.5	163.8	143.3	139.4	136.5	141.3
Male.....	2,950	142.8	156.1	303.4	170.6	110.4	98.9	122.8	149.9	130.2	121.7	124.4	109.8
Female.....	3,362	164.4	171.3	234.3	178.9	122.6	100.5	151.0	174.2	156.6	157.4	151.0	165.8
Other respiratory diseases:													
Both sexes.....	1,269	34.4	32.9	40.8	47.2	29.3	28.2	34.9	31.7	25.8	21.5	25.8	31.1
Male.....	598	29.7	31.6	42.0	50.0	26.9	24.2	32.4	27.9	23.5	17.9	33.6	16.0
Female.....	670	32.7	34.1	39.5	44.6	31.8	28.2	36.7	34.6	28.1	25.9	16.4	42.8
Minor digestive diseases:													
Both sexes.....	1,534	37.8	39.8	89.4	33.2	19.9	19.7	23.6	28.7	36.8	41.5	49.6	50.1
Male.....	710	34.4	37.6	89.0	32.6	21.3	13.1	14.5	27.1	31.6	37.4	46.0	43.5
Female.....	824	41.1	42.0	90.5	33.9	18.5	26.3	30.2	30.0	42.0	46.5	53.8	55.3
Other digestive diseases:													
Both sexes.....	827	23.2	21.5	14.7	12.6	12.7	19.7	30.2	29.6	26.8	29.2	23.1	30.1
Male.....	344	19.4	18.2	14.2	12.8	12.2	15.1	20.1	30.8	18.5	25.5	14.9	22.9
Female.....	483	26.9	24.6	15.3	12.4	13.2	24.3	37.5	28.7	35.2	33.9	32.9	35.7
Communicable diseases:													
Both sexes.....	2,219	44.2	57.6	136.4	141.6	55.2	22.0	18.4	20.6	17.2	15.5	11.5	9.0
Male.....	1,092	43.5	57.8	133.5	143.3	53.9	24.9	15.7	20.4	13.1	19.5	11.2	4.6
Female.....	1,127	44.7	57.4	140.5	139.9	56.5	19.0	20.4	20.7	21.3	10.6	12.0	12.5
Ear and mastoid diseases:													
Both sexes.....	428	9.6	11.1	25.8	16.3	10.3	5.9	6.6	7.6	5.4	6.3	8.8	5.0
Male.....	214	9.5	11.3	31.0	14.9	10.4	6.5	5.6	5.8	4.4	3.8	11.2	6.9
Female.....	214	9.7	10.9	20.5	17.6	10.1	5.3	7.3	9.0	6.4	9.3	6.0	3.6
Nervous diseases except cerebral hemorrhage, paralysis, neuralgia, and neuritis:													
Both sexes.....	359	10.3	9.3	6.2	4.9	3.7	7.2	11.8	14.5	12.3	11.9	17.0	12.0
Male.....	96	5.1	5.1	7.1	5.3	3.5	6.5	1.1	3.7	4.4	4.9	8.7	9.2
Female.....	263	15.1	13.4	5.2	4.5	4.0	7.9	19.6	22.5	20.3	20.6	26.9	14.3
Rheumatism and related diseases:													
Both sexes.....	556	17.6	14.4	.4	3.3	3.3	3.6	3.8	19.0	26.0	35.8	51.6	36.1
Male.....	246	15.6	13.0	.4	4.3	3.0	3.9	2.2	15.0	23.8	30.4	48.5	32.0
Female.....	310	19.5	15.8	.4	2.4	3.5	3.3	4.9	21.9	28.1	42.5	55.3	39.2
Degenerative diseases:													
Both sexes.....	1,008	36.0	26.2	6.3	7.5	7.2	11.8	10.9	23.2	34.6	50.1	80.8	212.4
Male.....	374	28.6	19.8	6.1	8.5	7.0	7.9	6.7	13.3	22.5	29.8	64.7	210.5
Female.....	634	43.6	32.3	6.7	6.6	7.5	15.8	13.9	30.6	46.8	75.0	100.1	213.9
Skin diseases:													
Both sexes.....	947	23.5	24.6	29.9	28.5	27.6	34.1	19.3	20.6	20.1	20.6	13.6	21.0
Male.....	469	23.7	24.8	30.6	27.3	26.1	36.0	20.1	24.1	21.5	18.4	12.4	16.0
Female.....	478	23.5	24.4	29.4	29.7	29.1	32.2	18.8	17.9	18.6	23.2	14.9	25.0
Female genital and puerperal diagnoses:													
Both sexes.....	1,260	36.7	32.7	.4	.3	2.0	18.4	99.6	107.3	50.9	17.6	4.8	4.0
Female.....	1,260	67.4	64.2	.7	.7	4.0	36.8	172.2	186.8	102.3	39.2	10.5	7.1
Accidental injuries:													
Both sexes.....	2,243	57.1	58.2	57.0	67.4	61.6	59.0	50.5	55.9	54.8	52.8	49.6	60.1
Male.....	1,392	70.9	73.7	69.8	90.4	87.8	85.1	73.8	69.5	68.1	58.5	49.8	43.5
Female.....	851	44.0	43.4	44.0	44.9	41.0	32.8	33.5	45.7	41.3	45.8	49.3	73.1
All other diseases:													
Both sexes.....	1,741	44.3	45.2	75.3	33.9	27.1	32.1	37.3	47.3	44.9	48.9	49.6	48.1
Male.....	712	34.9	37.7	82.3	30.1	24.8	24.9	12.3	29.1	32.6	34.7	47.3	41.2
Female.....	1,027	52.7	52.3	67.8	37.7	29.6	39.4	55.5	60.8	57.3	66.4	52.3	53.5

<sup>1</sup> Physicians (M. D.) not designated by family informants as specialists; attendance may have been in office, home, or upon a private patient in a hospital.

<sup>2</sup> For International List numbers, see table 5. For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>4</sup> Rates adjusted by the direct method as described in note to table 5.



TABLE 7.—*Illnesses from certain causes attended at home<sup>1</sup> by private general physicians per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31*

[Sole or primary diagnoses only]

Sex and diagnosis <sup>2</sup> group	All ages <sup>3</sup>		Age										
	Number of cases with home calls	Adjusted <sup>4</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Cases with home calls <sup>1</sup> by physician per 1,000 population during year													
Minor respiratory diseases:													
Both sexes.....	4,348	104.2	112.8	222.7	131.6	82.1	59.0	80.7	104.6	87.4	86.8	85.5	111.2
Male.....	2,008	94.6	106.3	230.1	130.1	80.8	58.3	61.5	89.9	72.5	73.7	75.9	80.1
Female.....	2,339	113.0	119.2	216.5	133.0	83.4	59.8	94.7	115.5	102.3	102.9	97.2	135.5
Other respiratory diseases:													
Both sexes.....	674	16.6	17.5	29.6	25.5	12.0	14.4	16.5	14.2	11.3	11.0	14.9	23.0
Male.....	309	15.0	16.4	30.6	25.2	12.6	13.8	11.2	10.8	9.4	8.7	18.7	16.0
Female.....	364	17.8	18.5	28.3	25.9	11.5	15.1	20.4	16.7	13.2	13.9	10.5	28.5
Minor digestive diseases:													
Both sexes.....	847	20.0	22.0	58.8	22.0	12.0	11.1	9.4	12.1	14.2	17.6	25.8	32.1
Male.....	357	16.2	18.9	55.2	20.6	12.2	7.2	6.7	7.9	10.1	13.0	19.9	20.6
Female.....	490	23.8	25.0	63.0	23.5	11.9	15.1	11.4	15.1	18.3	23.2	32.9	41.0
Other digestive diseases:													
Both sexes.....	452	12.9	11.7	7.1	8.0	8.1	11.8	16.0	16.3	12.5	14.6	14.3	23.0
Male.....	169	9.4	8.9	7.8	8.9	7.0	8.5	7.8	12.5	7.1	11.9	7.5	16.0
Female.....	283	16.2	14.4	6.3	7.3	9.3	15.1	22.0	19.1	18.0	17.9	22.4	28.5
Communicable diseases:													
Both sexes.....	1,748	33.9	45.4	112.6	117.6	43.3	14.8	11.3	13.3	11.1	9.3	5.4	5.0
Male.....	850	32.7	45.0	108.6	117.7	43.9	17.7	5.6	11.7	8.1	13.0	3.7	16.0
Female.....	898	34.9	45.8	117.7	117.4	42.8	11.8	15.5	14.5	14.2	4.6	7.5	8.9
Ear and mastoid diseases:													
Both sexes.....	213	4.3	5.5	17.4	10.1	3.9	1.3	2.8	1.8	1.7	2.4	2.0	-----
Male.....	112	4.2	5.9	22.8	8.5	4.3	2.0	1.1	.4	2.0	1.1	1.2	-----
Female.....	101	4.3	5.1	11.9	11.7	3.5	.7	4.1	2.8	1.4	4.0	3.0	-----
Nervous diseases except cerebral hemorrhage, paralysis, neuralgia, and neuritis:													
Both sexes.....	182	5.3	4.7	5.3	2.1	1.3	3.9	5.7	6.0	4.9	6.0	12.2	9.0
Male.....	55	3.1	2.9	6.4	2.1	1.3	4.6	1.1	.8	1.0	2.7	7.5	9.2
Female.....	127	7.4	6.5	4.1	2.1	1.3	3.3	9.0	9.9	8.8	10.0	17.9	8.9
Rheumatism and related diseases:													
Both sexes.....	280	8.9	7.3	.2	3.0	2.4	2.0	2.4	9.2	12.3	17.0	23.8	21.0
Male.....	114	7.1	6.0	.4	3.9	2.6	2.6	1.1	6.2	9.4	14.6	17.4	16.0
Female.....	166	10.6	8.5	-----	2.1	2.2	1.3	3.3	11.4	15.2	19.9	31.4	25.0
Degenerative diseases:													
Both sexes.....	488	19.2	12.7	2.2	2.3	3.1	4.6	5.7	9.6	13.2	23.3	38.7	154.3
Male.....	172	14.5	9.1	2.1	2.5	2.6	1.3	2.2	5.4	9.1	13.6	29.9	135.0
Female.....	316	23.7	16.1	2.2	2.1	3.5	7.9	8.2	12.7	17.3	35.2	49.3	169.3
Skin diseases:													
Both sexes.....	207	5.1	5.4	9.1	5.8	3.9	7.5	2.4	4.4	3.7	5.1	4.1	7.0
Male.....	105	5.2	5.6	9.6	6.0	5.6	6.5	2.2	5.4	3.4	3.8	3.7	6.9
Female.....	102	5.1	5.2	8.6	5.5	2.2	8.5	2.4	3.7	4.1	6.6	4.5	7.1
Female genital and puerperal diagnoses:													
Both sexes.....	841	24.5	21.8	.2	.2	.7	11.5	68.0	73.4	33.9	9.8	2.7	3.0
Female.....	841	44.8	42.8	.4	.3	1.3	23.0	117.6	127.9	68.1	21.9	6.0	5.3
Accidental injuries:													
Both sexes.....	876	22.8	22.7	26.3	26.1	20.8	18.0	17.9	20.2	21.1	20.9	26.5	40.1
Male.....	477	24.2	25.2	31.0	31.9	23.9	26.2	23.5	20.8	22.5	20.1	21.1	22.9
Female.....	399	21.5	20.3	21.6	20.4	17.6	9.8	13.9	19.8	19.7	21.9	32.9	53.5
All other diseases:													
Both sexes.....	671	16.4	17.4	41.4	14.0	8.1	7.9	8.5	14.7	15.0	16.4	17.7	27.1
Male.....	273	12.1	14.4	46.7	11.3	7.8	4.6	3.4	8.0	9.4	13.6	11.2	16.0
Female.....	396	20.1	20.2	35.4	16.6	8.4	11.2	12.2	21.9	20.7	19.9	23.4	35.7

<sup>1</sup> Including all cases (disabling and nondisabling) with 1 or more calls to the home of the patient by private physicians (M. D.) not designated by family informants as specialists.<sup>2</sup> For International List numbers, see table 5. For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.<sup>4</sup> Rates adjusted by the direct method as described in note to table 5.

TABLE 8.—Calls by any practitioner<sup>1</sup> in connection with illness from certain causes per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31.

[Sole or primary diagnoses only]

Sex and diagnosis <sup>2</sup> group	All ages <sup>3</sup>			Age <sup>4</sup>										
	Number of calls	Adjusted <sup>5</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
				Annual calls <sup>1</sup> by any practitioner per 1,000 population										
Minor respiratory diseases:														
Both sexes.....	17,658	446	458	750	452	297	274	343	496	415	428	489	551	
Male.....	8,186	410	433	752	445	297	292	310	488	378	317	511	263	
Female.....	9,468	479	482	753	460	297	255	367	502	452	504	463	775	
Other respiratory diseases:														
Both sexes.....	11,548	296	300	286	422	230	235	296	298	280	292	308	332	
Male.....	5,522	288	292	326	402	216	243	255	243	243	326	359	192	
Female.....	6,021	300	307	244	441	244	227	254	339	316	250	245	440	
Minor digestive diseases:														
Both sexes.....	4,222	108	110	231	59	44	35	68	74	147	141	152	163	
Male.....	1,659	81	88	217	53	33	18	21	69	102	92	78	158	
Female.....	2,563	136	131	246	64	55	53	103	77	193	201	241	168	
Other digestive diseases:														
Both sexes.....	6,315	189	164	47	51	90	134	235	242	234	234	384	266	
Male.....	2,732	168	145	45	50	68	111	130	264	190	225	327	275	
Female.....	3,583	210	183	50	53	112	156	312	226	278	244	453	258	
Communicable diseases:														
Both sexes.....	9,058	197	235	466	436	241	112	138	157	130	119	80	62	
Male.....	4,504	197	238	447	476	236	147	104	154	92	148	114	39	
Female.....	4,554	194	232	490	397	247	77	163	159	169	84	39	80	
Ear and mastoid diseases:														
Both sexes.....	2,977	69	77	138	112	54	59	39	51	84	38	74	42	
Male.....	1,529	72	81	152	95	70	69	23	34	103	24	104	69	
Female.....	1,448	65	74	124	129	38	49	51	63	64	50	37	21	
Nervous diseases except cerebral hemorrhage, paralysis, neuralgia, and neuritis:														
Both sexes.....	2,491	71	65	38	30	43	44	35	95	78	130	109	106	
Male.....	702	39	37	32	33	22	43	4	42	35	55	86	48	
Female.....	1,789	103	91	45	27	64	45	57	134	122	221	136	152	
Rheumatism and related diseases:														
Both sexes.....	3,901	123	101	1	22	29	14	49	111	189	239	445	178	
Male.....	1,794	111	95	1	24	43	14	8	79	209	202	444	119	
Female.....	2,107	132	107	1	20	15	14	78	135	168	284	447	225	
Degenerative diseases:														
Both sexes.....	9,411	350	244	30	46	58	121	75	154	343	534	726	2,380	
Male.....	3,582	283	190	31	34	57	77	37	78	234	377	637	2,238	
Female.....	5,829	417	297	29	57	59	166	102	211	453	726	834	2,490	
Skin diseases:														
Both sexes.....	4,510	119	117	102	86	125	172	126	107	125	130	88	138	
Male.....	2,345	125	124	98	91	116	199	109	120	158	132	65	144	
Female.....	2,165	114	110	107	82	134	146	140	97	92	127	117	134	
Female genital and puerperal diagnoses:														
Both sexes.....	11,425	332	296	4	2	9	111	848	1,016	467	166	37	70	
Female.....	11,425	608	582	9	5	19	223	1,467	1,770	938	369	81	125	
Accidental injuries:														
Both sexes.....	11,062	302	287	185	293	275	294	389	259	352	259	261	550	
Male.....	7,070	390	374	231	416	379	397	683	360	457	272	291	429	
Female.....	3,992	222	203	138	174	169	190	175	185	246	244	226	647	
All other diseases:														
Both sexes.....	12,785	346	332	347	189	215	213	273	359	404	570	376	532	
Male.....	4,766	244	252	327	221	174	162	85	213	299	392	213	355	
Female.....	7,988	442	407	358	159	256	264	410	468	509	788	573	670	

<sup>1</sup> Includes calls (home, office, clinic) by any practitioner on all cases (disabling and nondisabling); that is, by physician, specialist, clinic, chiroprapist, osteopath, chiropractor, midwife, or other healer, except dentist (see notes to table 1). Services to patients in hospitals by the hospital staff are not counted as calls, but calls by private physicians are counted. Calls by nurse are not counted as her work is usually supervised by some other practitioner primarily responsible for the case. Calls include those within the study year only, but the case may have had its onset prior to the study year or have been still sick at the end of the year. In computing total calls, cases with an unknown number of calls were put in at an average based on cases of the same diagnosis group with known numbers of calls, exclusive of the few cases with 100 or more calls.

<sup>2</sup> For International List numbers, see table 5. For further details about specific diagnoses included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>4</sup> Rates adjusted by the direct method as described in note to table 5.

<sup>5</sup> Rates plotted in figures 7 and 8 as 15-24: Other respiratory, male 284, female 239; other digestive, male 118, female 226; nervous, male 29, female 51; skin, male 166, female 143; accidents, male 503, female 183. Rates plotted as 35-54: Ear and mastoid, male 73, female 61. Rates plotted as 55 and over: Minor respiratory, male 424, female 606; other respiratory, male 301, female 334; minor digestive, male 106, female 207; other digestive, male 309, female 364; communicable, male 88, female 58; ear and mastoid, male 92, female 30; skin, male 93, female 124.

TABLE 9.—Calls by private general<sup>1</sup> physicians in connection with illness from certain causes per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31

[Sole or primary diagnoses only]

Sex and diagnosis <sup>2</sup> group	All ages <sup>3</sup>		Age										
	Number of calls by physicians	Adjusted <sup>4</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Annual calls by private general <sup>1</sup> physicians per 1,000 population													
Minor respiratory diseases:													
Both sexes.....	14,942	378	388	618	392	269	243	284	407	348	369	402	496
Male.....	6,853	343	364	624	392	266	261	219	391	310	269	433	247
Female.....	8,089	409	410	616	392	272	225	331	419	386	491	365	690
Other respiratory diseases:													
Both sexes.....	7,041	185	183	192	244	143	152	214	175	149	146	227	295
Male.....	3,532	187	187	225	265	132	176	279	125	157	131	301	165
Female.....	3,507	181	179	159	224	154	129	167	212	140	164	138	396
Minor digestive diseases:													
Both sexes.....	3,306	86	86	176	51	35	35	57	60	106	100	130	150
Male.....	1,395	70	74	178	47	31	18	21	60	76	74	76	158
Female.....	1,911	102	97	175	55	38	53	83	59	136	132	196	144
Other digestive diseases:													
Both sexes.....	3,775	113	98	30	33	39	75	134	154	131	167	203	172
Male.....	1,669	101	88	27	37	30	81	64	187	92	164	206	82
Female.....	2,106	124	107	34	30	47	70	184	130	170	171	199	242
Communicable diseases:													
Both sexes.....	7,785	167	202	407	399	204	105	87	114	100	115	79	60
Male.....	3,894	167	206	391	438	215	138	64	83	72	141	114	34
Female.....	3,891	165	198	428	362	192	71	104	137	129	83	36	80
Ear and mastoid diseases:													
Both sexes.....	1,331	30	35	76	47	28	19	19	26	22	29	19	13
Male.....	624	27	33	86	40	40	20	8	10	20	15	24	23
Female.....	707	33	36	65	54	17	18	28	38	24	47	13	5
Nervous diseases except cerebral hemorrhage, paralysis, neuralgia, and neuritis:													
Both sexes.....	1,568	46	41	24	19	18	32	32	58	55	69	80	73
Male.....	457	25	24	25	20	18	34	4	13	25	35	55	41
Female.....	1,111	65	57	23	19	18	31	52	91	85	111	111	98
Rheumatism and related diseases:													
Both sexes.....	2,415	76	63	1	19	19	11	41	79	109	139	248	130
Male.....	1,092	68	58	1	20	23	14	8	55	120	119	255	89
Female.....	1,323	83	67	1	17	15	9	64	97	97	163	241	162
Degenerative diseases:													
Both sexes.....	7,258	283	188	25	27	33	92	62	98	239	409	551	2,209
Male.....	2,941	240	156	23	28	35	62	34	57	207	279	464	2,101
Female.....	4,317	326	220	27	27	31	123	83	129	271	569	656	2,294
Skin diseases:													
Both sexes.....	3,201	86	83	70	64	86	106	105	76	88	99	65	113
Male.....	1,680	93	89	55	70	104	106	82	95	109	102	63	137
Female.....	1,521	80	78	86	58	68	105	122	62	66	94	67	94
Female genital and puerperal diagnoses:													
Both sexes.....	8,792	256	228	2	1	9	99	663	779	350	135	28	42
Female.....	8,792	469	448	4	1	19	199	1,147	1,356	703	301	61	75
Accidental injuries:													
Both sexes.....	8,808	241	229	182	240	228	214	319	216	256	219	190	458
Male.....	5,804	322	307	189	333	321	311	677	297	873	225	218	405
Female.....	3,004	167	153	114	149	133	117	131	155	139	210	157	499
All other diseases:													
Both sexes.....	6,257	168	162	196	102	87	120	158	184	165	267	202	203
Male.....	2,369	123	125	200	105	79	98	39	108	121	166	179	162
Female.....	3,874	210	197	187	100	95	142	244	241	209	390	229	235

<sup>1</sup> Physicians (M. D.) not designated by family informants as specialists; includes home and office calls and calls on private patients in hospitals. Calls include those within the study year only, but the case may have had its onset prior to the study year or have been still sick at the end of the year. In computing total calls, cases with an unknown number of calls were put in at an average based on cases of the same diagnosis group with known numbers of calls by general physicians, exclusive of the few cases with 100 or more calls.

<sup>2</sup> For International List numbers, see table 5. For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>4</sup> Rates adjusted by the direct method as described in note to table 5.

TABLE 10.—Home calls<sup>1</sup> by private general physicians in connection with illness from certain causes per 1,000 population of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31  
(Sole or primary diagnoses only)

Sex and diagnosis <sup>2</sup> group	All ages <sup>3</sup>		Age <sup>4</sup>										
	Number of home calls	Adjusted <sup>5</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over
Annual home calls <sup>1</sup> by physicians per 1,000 population													
Minor respiratory diseases:													
Both sexes	10,330	256.4	268.0	477.4	300.6	193.1	133.8	183.6	260.6	210.1	244.7	203.7	433.9
Male	4,612	230.1	244.1	477.2	309.6	207.7	133.6	145.4	221.1	174.2	164.8	189.1	183.1
Female	5,716	289.6	291.2	480.6	291.9	178.2	133.9	211.4	290.0	246.4	342.6	221.2	629.2
Other respiratory diseases:													
Both sexes	3,869	100.2	100.4	147.3	159.2	69.4	87.2	56.6	69.1	60.0	71.6	129.0	260.5
Male	1,841	92.0	97.4	169.9	166.7	67.8	87.8	52.6	34.6	62.8	41.7	171.6	164.8
Female	2,026	105.9	103.2	124.1	152.0	71.0	86.7	59.6	94.8	57.3	108.2	77.7	335.1
Minor digestive diseases:													
Both sexes	1,627	39.3	42.2	115.2	33.2	20.6	18.7	14.6	19.5	38.6	35.8	41.4	90.2
Male	666	31.6	35.2	112.9	28.0	19.1	9.2	11.2	13.3	21.8	21.7	28.6	91.5
Female	961	47.4	49.0	118.5	38.3	22.1	28.2	17.1	24.1	55.6	53.1	56.8	89.1
Other digestive diseases:													
Both sexes	1,852	58.4	48.0	13.2	22.7	26.3	46.6	59.0	66.7	47.6	74.0	131.7	147.3
Male	748	46.8	39.6	12.1	29.1	16.1	49.8	19.0	63.7	23.5	72.1	153.0	52.6
Female	1,104	67.6	56.2	14.5	16.6	36.6	43.3	88.2	68.9	71.8	76.4	106.1	221.0
Communicable diseases:													
Both sexes	5,828	120.4	151.2	328.1	322.3	163.5	78.4	53.8	65.4	67.8	63.3	22.4	42.1
Male	2,842	113.1	150.4	319.1	355.7	174.7	104.8	15.7	35.4	34.6	81.8	17.4	—
Female	2,986	125.1	152.1	340.2	289.8	152.2	51.9	81.6	87.7	101.3	40.5	28.4	74.9
Ear and mastoid diseases:													
Both sexes	597	12.4	15.5	46.8	23.4	13.8	6.6	12.7	5.3	5.9	7.5	3.4	—
Male	309	11.9	16.4	56.6	20.2	20.4	11.1	2.2	.8	5.7	2.7	3.7	—
Female	288	12.5	14.7	36.9	26.6	7.1	2.0	20.4	8.6	6.1	13.3	3.0	—
Nervous diseases except cerebral hemorrhage, paralysis, neuralgia, and neuritis:													
Both sexes	734	22.3	19.0	15.8	7.7	8.3	16.4	12.3	22.2	20.2	33.4	54.3	51.1
Male	219	12.9	11.6	21.7	6.4	8.3	20.3	4.5	1.2	5.0	10.3	38.6	41.2
Female	515	31.5	26.2	9.7	9.0	8.4	12.5	18.0	37.7	35.6	61.8	73.2	58.8
Rheumatism and related diseases:													
Both sexes	1,035	31.7	26.9	.4	15.0	12.0	4.6	11.3	33.7	48.7	54.6	69.9	79.2
Male	491	28.6	26.0	.7	13.1	15.6	6.5	6.7	30.0	65.1	39.0	49.8	50.3
Female	544	34.8	27.7	—	16.9	8.4	2.6	14.7	36.4	32.2	73.7	94.2	101.6
Degenerative diseases:													
Both sexes	3,476	150.4	90.2	13.4	8.2	11.2	23.9	22.2	41.0	77.9	148.6	255.9	1584.2
Male	1,359	125.5	71.9	15.0	12.4	7.8	3.3	17.9	22.1	56.7	92.1	264.9	1384.4
Female	2,117	173.3	107.9	11.9	4.1	14.6	44.6	25.3	55.0	99.3	217.8	245.1	1739.8
Skin diseases:													
Both sexes	587	16.9	15.2	16.1	11.0	12.7	20.0	3.8	11.3	10.8	17.9	27.8	65.1
Male	324	20.7	17.1	15.3	11.0	21.3	17.7	4.5	11.7	14.1	13.0	31.1	116.7
Female	263	13.9	13.4	17.1	11.1	4.0	22.3	3.3	11.1	7.5	23.9	23.9	25.0
Female genital and puerperal diagnoses:													
Both sexes	3,894	112.8	101.0	.7	.2	.7	45.2	285.5	337.2	169.3	59.1	12.9	14.0
Female	3,894	207.3	198.4	1.5	.3	1.3	90.6	493.9	587.4	340.2	131.5	28.4	25.0
Accidental injuries:													
Both sexes	2,767	78.8	71.8	61.1	79.6	53.4	48.9	69.4	60.6	75.2	71.9	68.6	292.6
Male	1,528	81.3	80.9	76.2	108.5	73.0	67.5	109.6	65.4	95.7	43.4	65.9	132.7
Female	1,239	76.1	63.1	45.8	51.5	33.5	30.2	40.0	57.1	54.6	106.9	71.7	417.1
All other diseases:													
Both sexes	1,971	50.4	51.1	99.8	45.7	18.8	31.8	16.5	45.7	48.2	63.9	41.4	118.2
Male	776	34.2	41.1	111.1	60.3	17.8	20.3	3.4	10.4	24.2	41.2	33.6	38.9
Female	1,182	64.2	60.2	83.8	31.4	19.9	43.3	26.1	72.0	72.5	91.6	50.8	180.0

<sup>1</sup> Includes calls to the home of the patient on all cases (disabling and nondisabling) by private physicians (M. D.) not designated by family informants as specialists. Calls include those within the study year only, but the case may have had its onset prior to the study year or have been still sick at the end of the year. In computing total home calls, cases with an unknown number of home calls were put in at an average based on cases of the same diagnosis group with known numbers of home calls, exclusive of the few extreme cases with 100 or more calls.

<sup>2</sup> For International List numbers, see table 5. For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>4</sup> Rates adjusted by the direct method as described in note to table 5.

<sup>5</sup> Rates plotted in figures 7 and 8 as 5-14; Skin, male 15.6, female 7.9. Rates plotted as 15-24: Other digestive, male 38.4, female 63.3; ear and mastoid, male 7.8, female 10.2; nervous, male 14.5, female 14.9, skin, male 12.8, female 13.8; accidents, male 83.0, female 34.6. Rates plotted as 35-54: Ear and mastoid; male 4.6, female 8.5; rheumatism, male 55.1, female 46.2; accidents, male 75.7, female 72.2. Rates plotted as 55 and over: Minor respiratory, male 186.9, female 407.3; other respiratory, male 169.2, female 195.1; minor digestive, male 50.8, female 71.5; other digestive, male 117.6, female 158.5; communicable, male 11.3, female 49.6; ear and mastoid, male 2.4, female 1.6; skin, male 61.2, female 24.4.

**TABLE 11.—Calls by any practitioner per attended case<sup>1</sup> of certain diagnoses for persons of specific ages for each sex—8,758 canvassed white families in 18 States during 12 consecutive months, 1928-31**

(Sole or primary diagnoses only)

Sex and diagnosis <sup>1</sup> group	All ages <sup>2</sup>			Age <sup>3</sup>										
	Number of at- tended cases	Adjusted <sup>4</sup>	Crude	Under 5	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65 and over	
				Calls by any practitioner per attended case <sup>1</sup>										
Minor respiratory diseases:														
Both sexes .....	7,283	2.5	2.4	2.1	2.2	2.3	2.4	2.5	2.7	2.5	2.7	3.2	3.5	
Male .....	3,406	2.5	2.4	2.0	2.3	2.3	2.7	3.1	2.9	2.5	2.3	3.7	2.2	
Female .....	3,875	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.6	2.5	3.1	2.8	4.2	
Other respiratory diseases:														
Both sexes .....	1,991	6.1	5.8	4.9	5.3	4.3	5.5	6.0	6.2	6.5	9.0	8.7	9.7	
Male .....	943	6.2	5.9	5.5	4.8	4.3	5.7	7.7	5.6	6.1	10.9	9.0	9.3	
Female .....	1,046	6.0	5.8	4.3	5.8	4.2	5.2	4.9	6.6	6.8	7.1	8.2	9.9	
Minor digestive diseases:														
Both sexes .....	1,772	2.5	2.4	2.1	1.6	2.1	1.7	2.7	2.3	3.6	3.0	2.8	3.0	
Male .....	813	2.1	2.0	2.0	1.4	1.4	1.3	1.5	2.2	3.0	2.3	1.5	3.3	
Female .....	959	2.9	2.7	2.1	1.7	2.8	1.8	3.1	2.3	4.0	3.7	4.0	2.8	
Other digestive diseases:														
Both sexes .....	945	7.2	6.7	2.8	3.7	5.9	5.7	7.2	7.6	7.4	7.1	12.9	8.0	
Male .....	391	7.6	7.0	2.7	3.7	4.9	6.8	5.5	8.0	8.6	7.7	15.6	10.9	
Female .....	554	6.9	6.5	2.8	3.7	6.7	5.2	8.0	7.3	6.8	6.6	11.2	6.6	
Communicable diseases:														
Both sexes .....	2,496	4.0	3.6	3.0	2.7	3.8	4.6	6.8	6.9	6.9	7.3	6.9	6.9	
Male .....	1,224	4.1	3.7	3.0	2.9	3.8	5.5	6.2	7.0	6.5	7.2	10.2	8.5	
Female .....	1,272	3.9	3.6	3.1	2.5	3.8	3.6	7.1	6.9	7.1	7.5	3.3	6.4	
Ear and mastoid diseases:														
Both sexes .....	676	4.5	4.4	3.5	4.4	3.6	5.3	4.0	4.6	8.3	4.1	4.7	4.7	
Male .....	337	4.7	4.5	3.5	3.9	4.1	5.6	2.6	3.6	11.8	3.7	5.3	6.0	
Female .....	339	4.3	4.3	3.4	4.7	2.9	4.9	4.8	5.2	5.6	4.4	3.6	3.0	
Nervous diseases except cere- bral hemorrhage, paralysis, neuralgia, and neuritis:														
Both sexes .....	465	5.4	5.4	4.9	4.7	6.8	4.6	2.8	5.3	4.8	7.7	5.3	7.1	
Male .....	132	5.7	5.3	3.4	5.1	3.6	5.4	4.0	7.8	5.7	7.2	7.7	4.2	
Female .....	333	5.4	5.4	7.2	4.3	9.7	4.1	2.8	4.9	4.5	7.9	4.3	8.5	
Rheumatism and related dis- eases:														
Both sexes .....	699	5.5	5.6	3.0	5.5	7.8	3.3	10.3	4.8	5.7	5.3	6.6	4.0	
Male .....	307	5.7	5.8	2.0	4.9	10.9	3.7	3.5	4.2	7.2	5.1	7.0	3.1	
Female .....	392	5.3	5.4	4.0	6.6	4.3	3.0	12.0	5.1	4.5	5.4	6.1	4.7	
Degenerative diseases:														
Both sexes .....	1,161	8.6	8.1	4.0	4.4	6.3	8.6	5.9	5.9	8.5	9.3	7.7	10.4	
Male .....	435	8.7	8.2	4.1	3.4	6.9	7.8	4.7	5.5	8.5	10.2	8.4	9.9	
Female .....	726	8.5	8.0	3.9	5.3	5.8	9.0	6.3	6.0	8.6	8.8	7.2	10.8	
Skin diseases:														
Both sexes .....	1,146	4.2	3.9	2.7	2.6	3.7	4.3	5.1	4.3	5.3	4.9	6.2	5.5	
Male .....	555	4.5	4.2	2.5	2.8	4.0	4.8	4.4	4.5	6.4	5.5	5.2	7.9	
Female .....	591	3.9	3.7	3.0	2.4	3.4	3.7	5.5	4.1	4.2	4.3	7.1	4.4	
Female genital and puerperal diagnoses:														
Female .....	1,491	7.6	7.7	4.6	3.5	4.7	5.3	7.2	8.0	7.7	8.1	6.0	17.5	
Accidental injuries:														
Both sexes .....	2,595	4.6	4.3	2.8	3.8	3.7	4.2	6.7	4.2	5.3	4.3	4.5	8.2	
Male .....	1,602	4.8	4.4	2.9	4.0	3.8	4.1	8.0	4.5	5.6	4.1	5.1	8.1	
Female .....	993	4.3	4.0	2.6	3.3	3.5	4.6	4.5	3.7	4.9	4.6	3.8	8.3	
All other diseases:														
Both sexes .....	2,849	4.7	4.5	3.4	3.5	4.4	4.2	4.5	4.5	4.9	6.2	4.4	6.7	
Male .....	1,139	4.3	4.2	3.0	4.3	4.1	3.9	3.0	4.1	5.1	6.3	3.3	5.3	
Female .....	1,706	4.9	4.7	3.7	2.8	4.7	4.5	4.9	4.7	4.8	6.2	5.0	7.5	

<sup>1</sup> Average calls during study year per attended case as shown in this table is computed from calls as defined in table 8 and attended cases as defined in table 5.

<sup>2</sup> For International List numbers, see table 5. For further details about specific diseases included in each broad group, see figure 1 and table 2 of preceding paper (15).

<sup>3</sup> "All ages" includes a few of unknown age; "both sexes" includes a few of unknown sex.

<sup>4</sup> Figures in the "adjusted" column represent the result of dividing the adjusted rate for calls per 1,000 (table 8) by the adjusted rate for attended cases per 1,000 (table 5).

<sup>5</sup> Rates plotted in figures 7 and 8 as under 15: Nervous, male 4.0, female 6.9. Rates plotted as 5-14: Rheumatism, male 7.2, female 5.5. Rates plotted as 15-24: Other respiratory, male 6.5, female 5.1; minor digestive, male 1.4, female 2.4; other digestive, male 6.2, female 6.6; ear and mastoid, male 4.7, female 4.9; nervous, male 5.3, female 3.3; rheumatism, male 3.6, female 7.8; skin, male 4.7, female 4.3; accidents, male 5.4, female 4.6. Rates plotted as 35-54: Other respiratory, male 7.6, female 6.9; ear and mastoid, male 9.3, female 5.2. Rates plotted as 45 and over: Communicable, male 7.8, female 6.2. Rates plotted as 55 and over: Minor respiratory, male 3.2, female 3.4; other respiratory, male 9.1, female 9.1; minor digestive, male 2.1, female 3.5; other digestive, male 13.7, female 9.1; ear and mastoid, male 5.4, female 3.4; nervous, male 6.4, female 6.7; skin, male 6.4, female 5.5.



## PROVISIONAL MORTALITY RATES FOR THE FIRST HALF OF 1940

The mortality rates in this report are based upon preliminary data from 31 States, the District of Columbia, Hawaii, and Alaska for the first 6 months of 1940. Comparative data for the first 6 months of 1938 and 1939 are presented for 30 States and the District of Columbia. This report is made possible through a cooperative arrangement with the respective States which voluntarily furnish provisional monthly tabulations of current birth and death statistics to the United States Public Health Service which analyzes and publishes the data. Because of lack of uniformity in the method of classifying deaths according to cause as well as some delay in filing certificates, these data are

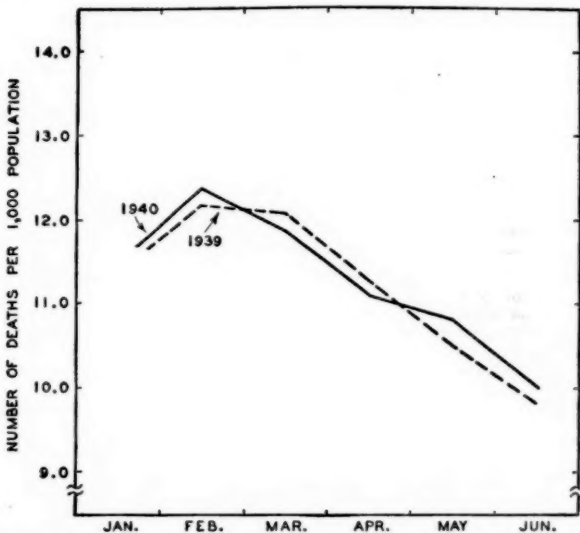


FIGURE 1.—Death rates per 1,000 population, by months, 1939 and 1940.

preliminary and may differ in some instances from the final figures subsequently published by the Bureau of the Census.

In the past, however, these preliminary reports have accurately reflected the trend in mortality rates for the country as a whole. Some deviation from the final figures, especially those for specific causes of death, for individual States may be expected because of the provisional nature of the information. Nevertheless, it is believed that the trend in mortality within each State is correctly represented. Comparisons of specific causes of death for different States are subject to error because of variations in tabulation procedure and promptness of filing the original certificates. Such comparisons should be based upon the final figures published by the Bureau of the Census.

The mortality rate from all causes per 1,000 population for the first half of 1940 was slightly higher than the corresponding rate for the two previous years, 11.3 compared with 11.2 and 11.0. During the current year the death rate has been higher than last year for 4 of the first 6 months (fig. 1). The slight rise results from increases in the chronic diseases of late adult life, since none of the acute diseases for which data are shown in the following tables has a rate higher than that reported during the 2 previous years.

In addition to increases in the mortality rates of chronic diseases, cancer, diabetes, cerebral hemorrhage, heart disorders and nephritis, there was a 4-percent increase in the death rate from accidents. The decrease in the relative number of fatal automobile accidents has apparently been replaced by an increase; the rate for the first half of 1940 was 7.8 percent above that in 1939. The increase was fairly widespread; 23 of the 32 reporting areas experienced a higher rate in 1940 than in the previous year.

The current period has been unusually free from outbreaks of the principal communicable diseases of childhood and adolescence, diphtheria, measles, scarlet fever, and whooping cough. The death rate from these diseases is one-third less than the corresponding rate in 1939 and nearly two-thirds less than the rate in 1938. The mortality rate from tuberculosis also maintained its downward trend and has been below 50 per 100,000 population for the entire 6 months.

Especially gratifying is the continued decline in the infant and maternal mortality rates. The number of infant deaths per 1,000 live births for the current period, 49, was nearly 6 percent lower than the rate for 1939, while the maternal mortality rate, 4.1 per 1,000 live births, was slightly over 2 percent less than last year.

The birth rate increased from 16.4 per 1,000 population in 1939 to 16.8 in 1940. The crude rate of natural increase, 5.5 per 1,000 population, was also slightly greater than for the first 6 months of 1939.

Provisional mortality from certain causes in the first 6 months of 1940, with comparative provisional data for the corresponding period in preceding years

State and period	Death rate per 100,000 population (annual basis)														
	Rate per 1,000 live births		All causes, rate per 1,000 population (annual basis)												
	Total infant mortality	Maternal mortality	Typhoid fever (1-2)	Cerebrospinal (meningococcus) meningitis (4)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Tuberculosis, all forms (13-22)	Influenza (grippe) (33)	Measles (35)	Acute poliomyelitis and Acute poliomyelitis (36)	Acute infectious encephalitis (lethargic) (37)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Cerebral hemorrhage, embolism, and thrombosis (88a, b)
31 STATES 1															
January-June:															
1940	49	4.1	0.6	0.9	0.7	2.0	1.0	49.6	22.3	0.4	0.2	0.5	120.1	28.4	97.1
1939	52	4.2	0.9	0.6	0.8	2.6	1.3	50.5	24.7	1.5	0.2	0.4	116.6	27.2	91.5
1938	53	4.6	1.0	1.0	1.1	4.1	1.6	52.3	15.6	4.5	0.3	0.5	113.8	24.7	86.1
January-March:															
1940	53	4.2	0.5	0.6	0.9	2.0	1.4	49.2	33.9	4.4	0.3	0.4	121.1	31.2	103.6
1939	56	4.4	0.9	0.7	1.1	2.7	1.8	49.9	33.0	1.6	0.1	0.5	117.0	28.7	96.3
1938	54	4.7	0.8	1.3	1.3	3.7	2.0	51.4	22.6	4.2	0.3	0.5	113.0	25.8	89.0
April-June:															
1940	45	4.0	0.8	0.5	0.5	2.1	0.6	49.9	10.7	0.5	0.2	0.6	119.0	25.6	90.5
1939	48	4.1	0.9	0.5	0.6	2.6	0.8	51.1	16.5	1.3	0.3	0.4	116.1	25.6	86.7
1938	51	4.6	1.3	0.8	0.9	4.5	1.1	53.1	8.8	4.7	0.3	0.5	114.6	23.6	83.2
Metropolitan Life Insurance Co., industrial policyholders, (January-June): 2															
1940	8.1		0.4	0.4	0.7	1.3	0.9	46.6	11.9	0.4			103.0	31.5	64.3
1939	8.2		0.5	0.5	1.0	1.9	1.2	47.4	15.6	1.0			100.6	29.1	63.5
1938	8.1		0.8	0.8	1.7	2.2	1.7	49.0	9.9	2.9			96.1	26.2	61.1
Alaska:															
1940	20.5	26.6	140	(7)	(7)	44.5	8.3	447.7	8.3	250.2	(6)	(7)	80.6	(7)	94.5
1939	15.2	21.6	76	(7)	(7)	17.0	31.2	349.2	28.4	(7)	(7)	(7)	76.7	5.7	63.5
1938	21.7	29.7	83	(7)	(7)	2.9	86.8	(7)	526.4	2.9	(7)	(7)	86.8	(7)	161.9
Colorado:															
1940	11.2	19.3	51	0.7	0.5	2.7	1.6	52.0	16.1	2.0	1.1	4	121.8	17.9	89.0
1939	11.8	18.3	59	1.1	0.9	1.5	3.1	59.8	31.0	2.2	0.5	4	114.7	17.4	92.6
1938	11.6	18.2	53	1.3	0.7	1.3	2.9	65.4	17.2	4.9	0.7	7	116.0	15.3	88.6

See footnotes at end of table.

Provisional mortality from certain causes in the first 6 months of 1940, with comparative provisional data for the corresponding period in preceding years—Continued

State and period		Rate per 1,000 live births		Death rate per 100,000 population (annual basis)																					
All causes, rate per 1,000 popula- tion (annual basis)	Births (exclusive of stillbirths), per 1,000 population (annual basis)	Maternal mortality		Typhoid fever (1-2)	Cerebrospinal (menin- gococcus) meningitis (6)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Tuberculosis, all forms (13-22)	Influenza (grippe) (33)	Measles (35)	Acute poliomyelitis and polioencephalitis (36)	Acute infectious enceph- alitis (lethargic) (37)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Cerebral hemorrhage, embolism, and throm- bosis (83a, b)	Diseases of the heart (90-95)	Pneumonia, all forms (107-109)	Diseases of the diges- tive system (115-129)	Diarrhea and enteritis under 2 years (119)	Nephritis, all forms (130-132)	All accidents, including automobile accidents (169-186)	Automobile accidents (170a, b, c)		
		Total infant mortality																							
31 STATES—continued																									
Connecticut:																									
1940	10.7	12.4	42	3.0	.5	( <sup>1</sup> )	.3	.2	34.6	6.6	.2	( <sup>1</sup> )	.2	148.5	22.1	119.3	331.2	55.9	45.1	1.8	66.1	55.5	16.4		
1939	10.7	13.1	39	3.4	( <sup>1</sup> )	.4	1.5	.6	40.2	8.3	( <sup>1</sup> )	( <sup>1</sup> )	.1	140.7	31.3	90.9	289.7	64.2	50.6	1.9	84.7	57.0	16.5		
1938	10.8	13.6	36	2.5	.2	.5	.6	1.0	39.1	5.2	( <sup>1</sup> )	( <sup>1</sup> )	.2	141.3	32.9	94.5	270.1	69.0	52.4	2.7	89.9	61.1	17.3		
Delaware:																									
1940	12.8	16.4	56	5.5	( <sup>1</sup> )	.8	2.3	3.0	( <sup>1</sup> )	50.8	18.2	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	144.0	33.4	110.7	380.6	72.8	47.0	4.5	138.0	56.1	21.2	
1939	13.1	16.0	49	4.8	( <sup>1</sup> )	2.3	.8	2.3	1.5	64.5	17.7	( <sup>1</sup> )	( <sup>1</sup> )	2.3	123.6	36.9	122.9	412.3	102.1	47.6	3.8	121.3	63.0	23.8	
1938	12.7	15.8	53	3.9	.8	.8	.8	8.5	1.6	44.2	16.3	1.6	( <sup>1</sup> )	( <sup>1</sup> )	128.0	31.8	111.7	387.0	98.5	58.2	6.2	121.0	73.7	24.8	
District of Columbia:																									
1940	13.6	21.2	48	2.0	.6	.9	.3	1.8	.3	67.2	11.7	( <sup>1</sup> )	.6	( <sup>1</sup> )	151.2	33.7	100.6	361.8	98.8	81.3	7.5	133.8	64.2	19.9	
1939	13.2	20.8	44	5.5	.3	.9	( <sup>1</sup> )	1.9	.6	69.8	14.0	( <sup>1</sup> )	( <sup>1</sup> )	.3	156.7	26.4	81.9	356.8	84.4	72.3	5.6	114.5	76.0	20.2	
1938	13.1	19.8	49	5.3	.3	2.6	1.0	.6	1.0	75.3	6.4	.6	( <sup>1</sup> )	1.0	137.8	22.6	88.0	355.0	109.4	69.8	7.7	112.6	67.3	19.1	
Florida:																									
1940	13.3	15.5	60	7.8	1.1	.4	.1	2.0	1.0	55.5	45.3	.6	.2	.4	99.9	21.1	126.1	338.7	70.0	73.2	7.0	97.2	100.4	39.3	
1939	11.9	15.3	65	6.3	1.5	.5	.3	3.9	1.4	52.3	32.4	1.2	.1	.2	95.6	21.8	98.6	288.2	60.9	79.6	12.7	96.9	95.7	38.1	
1938	12.1	15.1	62	7.8	3.2	1.0	.1	4.1	1.8	55.3	27.8	2.3	.3	.6	89.2	19.4	99.6	256.5	75.0	89.2	14.6	94.8	83.2	39.7	
Georgia:																									
1940	10.3	19.0	61	5.4	.7	.5	.5	2.8	1.5	49.7	47.9	1.0	.3	.1	59.5	11.3	98.1	198.8	83.8	36.0	6.2	103.4	59.3	20.1	
1939	9.7	18.4	67	6.1	1.4	.4	.3	4.4	1.3	44.6	40.7	2.9	.3	.1	56.6	12.0	90.1	163.1	83.9	54.0	12.1	91.2	62.8	18.5	
1938	10.7	19.1	73	6.7	2.2	1.0	.5	7.1	1.6	52.7	33.6	8.0	.4	.3	56.8	13.5	86.4	167.1	102.2	70.6	20.6	109.7	64.0	23.4	
Hawaii:																									
1940	7.3	22.2	49	2.3	2.8	.5	( <sup>1</sup> )	2.4	2.4	63.9	6.2	( <sup>1</sup> )	1.9	( <sup>1</sup> )	67.2	15.6	43.6	116.5	48.3	47.4	6.6	62.0	52.1	11.8	
1939	8.0	20.1	62	3.3	1.9	( <sup>1</sup> )	7.6	1.4	69.3	5.8	4.9	( <sup>1</sup> )	( <sup>1</sup> )	.5	66.4	18.8	45.7	133.7	67.8	54.8	11.1	73.6	51.0	13.5	
1938	8.1	22.2	58	2.9	1.5	1.0	.5	6.3	1.0	67.8	4.9	.5	( <sup>1</sup> )	.5	67.8	17.5	57.0	123.8	68.7	59.5	18.0	67.3	59.0	14.1	





Provisional mortality from certain causes in the first 6 months of 1940, with comparative provisional data for the corresponding period in preceding years—Continued

State and period	Death rate per 100,000 population (annual basis)																								
	Rate per 1,000 live births		Births (exclusive of stillbirths) per 1,000 population (annual basis)	All causes, rate per 1,000 population (annual basis)																					
	Total infant mortality	Maternal mortality		Typhoid fever (1-2)	Cerebrospinal (meningococcus, meningitis) (6)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Tuberculosis, all forms (13-22)	Influenza (grippe) (33)	Measles (35)	Acute poliomyelitis and polioencephalitis (36)	Acute infectious encephalitis (lethargic) (37)	Cancer, all forms (45-55)	Diabetes mellitus (61)	Cerebral hemorrhage, embolism, and thrombosis (83a, b)	Diseases of the heart (90-95)	Pneumonia, all forms (107-109)	Diseases of the digestive system (115-129)	Diarrhea and enteritis under 2 years (119)	Nephritis, all forms (130-132)	All accidents, including automobile accidents (169-195)	Automobile accidents (170a, b, c)		
31 STATES—continued																									
New Mexico:																									
1940	71	4.6	1.1	(7)	10.2	1.9	80.6	16.7	4	(7)	4	52.2	10.6	45.0	114.7	62.8	56.0	14.8	56.8	82.1	34.8				
1939	99	5.2	1.9	1.5	8.7	4.3	79.0	35.6	1.5	.4	52.7	7.4	43.0	121.6	118.1	61.6	10.5	51.4	72.4	33.3					
1938	88	5.2	2.0	.8	1.2	17.8	76.7	17.0	18.6	.8	53.4	5.9	42.3	121.3	93.7	69.6	18.2	58.1	71.5	26					
New York:																									
1940	39	3.5	1.1	.5	1.2	1.1	49.5	4.5	2	(9)	1.1	157.7	43.5	77.1	418.2	57.5	59.7	3.2	70.9	59.9	14.9				
1939	43	3.1	2.0	.6	1.1	.3	51.5	6.6	1.6	.1	156.1	43.4	71.5	395.3	78.8	61.7	4.5	76.4	59.4	14.2					
1938	43	3.9	.3	1.0	.7	1.2	52.8	4.8	1.3	(9)	152.8	37.4	66.9	374.8	80.0	62.1	5.2	76.7	59.2	16.1					
North Carolina:																									
1940	62	6.0	.5	.3	2.3	2.9	52.5	38.0	5	.2	59.4	15.4	91.0	159.6	79.4	42.9	7.3	106.8	60.1	22.7					
1939	63	5.5	.6	.5	2.1	2.8	54.0	28.0	3.1	.1	57.6	13.7	83.7	165.0	80.0	58.2	15.4	83.9	59.8	22.0					
1938	69	6.4	1.3	1.2	.7	3.7	56.7	19.3	11.9	.3	54.5	11.0	84.8	108.9	96.1	73.9	27.5	94.2	59.8	21.5					
North Dakota:																									
1940	41	1.5	.9	(7)	1.6	2.2	18.6	13.9	3	(7)	97.6	24.6	72.7	207.2	43.1	48.5	5.0	43.5	48.8	13.9					
1939	52	3.6	.9	1.9	3.7	2.5	23.8	30.7	6.3	(7)	91.9	24.2	76.9	204.6	72.2	54.6	6.6	41.4	41.7	10.7					
1938	45	1.7	(7)	1.6	3.7	9.4	26.2	12.2	3.1	(7)	91.0	21.8	61.7	156.2	63.9	51.7	5.5	46.1	43.6	11.5					
Ohio:																									
1940	40	3.8	.8	.6	8	1.7	42.8	20.6	(7)	(9)	136.5	31.9	117.3	335.2	67.6	52.9	3.3	83.0	82.9	24.7					
1939	45	4.2	.5	.2	1.5	1.2	46.8	30.3	1	.1	129.9	30.6	115.8	323.2	80.7	57.3	2.8	82.1	77.9	22.3					
1938	46	3.6	.4	.9	1.6	1.9	48.3	14.5	5.0	.2	125.0	27.5	105.5	285.3	76.0	58.7	3.4	80.3	77.9	22.3					
Oklahoma:																									
1940	48	3.6	1.5	1.4	4	1.6	49.6	33.9	3	1.1	83.2	16.2	81.5	199.6	73.4	52.3	3.5	64.5	55.8	17.4					
1939	56	4.1	2.2	.5	1.1	1.2	48.3	34.4	6.3	.4	80.2	14.0	90.5	169.9	91.1	53.3	0.0	61.9	97.9	20.7					
1938	47	4.7	2.5	.5	1.0	1.7	53.5	25.0	3.5	1.5	78.5	14.6	74.3	147.5	78.1	58.7	7.0	66.8	74.8	22.8					
South Carolina:																									
1940	78	7.2	1.8	.3	1	2.2	48.0	56.3	.7	.6	55.4	14.6	108.9	210.4	85.6	42.4	3.1	95.8	75.5	27.6					
1939	76	6.5	2.9	.8	.2	9.6	43.0	37.5	7.7	2.6	49.3	13.1	92.6	183.3	77.1	33.6	5.1	86.7	60.2	23.1					
1938	92	9.0	3.1	.8	.6	15.5	48.8	42.8	13.0	.5	50.3	11.1	91.1	186.2	100.7	10.7	83.8	52.2	21.2						



## SINUS INFECTION (SINUSITIS)<sup>1</sup>

### Definition.

Sinusitis is a disease of the lining and bony walls of the air-containing spaces of the bones in the face. All of these cavities communicate with the nasal passages by small openings. The intimate relation of sinusitis to disorders of the nose can readily be seen when one considers that infections in the nose may travel into the sinuses through these openings, or that any inflammation of the nose may close the mouths of the sinuses, thus interfering with proper drainage and favoring disease. Prolonged closure of the mouth of a sinus is followed by absorption of the air in the cavity with the formation of a vacuum and results in pain in the region of the involved sinus. When the lining of a sinus becomes inflamed, a profuse secretion forms which, when drainage is interfered with, may cause intense pain from actual pressure on the sinus wall.

The sinuses more commonly affected are the (1) *ethmoids* which lie between and behind the eyes, (2) the *maxillary* situated below the eye in the cheek bones, and (3) the *frontals* which are located above the eyes.

Sinusitis is a common disease and causes much ill health, suffering, and lowered vitality.

### Cause.

Sinusitis is most frequently due to an extension of infection from the lining of the nose which results from either the common head cold or influenza. Injuries to the facial bones, bathing, and diving have been recorded as factors. In the case of the maxillary sinus, dental disease and tooth extraction may be responsible as the roots of the upper back teeth are frequently in contact with or protrude through the floor of the sinus. Allergy and dietary deficiencies are important predisposing factors.

### Symptoms.

A head cold that lingers on or repeated attacks of head colds may be the only warning that sinus disease is present. The usual symptoms are nasal obstruction and a discharge of mucopus or pus depending upon the severity of infection. The discharge may be slight, and evident only as post-nasal dripping, or it may be very profuse. Dull headache or pain is present over the affected sinus. In the acute stage, when the natural drainage of the sinus is interfered with, headache is more severe.

### Diagnosis.

A physician competent in the treatment of diseases of the nose should be consulted to make the proper diagnosis. The X-ray is of considerable assistance.

<sup>1</sup> This material is available in leaflet form and a limited number of copies may be obtained by addressing the Surgeon General, U. S. Public Health Service, Washington, D. C.

**Treatment.**

Medical treatment is directed toward the relief of pain, the lessening of discharge, and an attempt to diminish absorption from a sinus acting as a focus of infection. When medical treatment fails to give relief, surgery is directed to establish drainage.

**Prevention.**

The most important means of preventing sinus infection is to observe the modern rules of personal hygiene and so to maintain good general health and body resistance to disease. This includes following a diet which supplies the necessary variety of foods, obtaining sufficient amount of rest, both mental and physical, to avoid exhaustion of strength, protection to the body when out-of-doors, and a regard for the temperature and ventilation of the home. Fresh warm air of a proper degree of moisture, free from appreciable draft, is now recognized as essential to indoor workers.

Since the common cold is often the forerunner of sinus disease close contact with a person afflicted with a cold should be avoided. When one has a cold the mouth and nose should be covered on unavoidable coughing or sneezing. Secretions from the nose and throat should be carefully disposed of so that no other person may be exposed.

**Effect of Climate.**

Your physician will be able to advise whether or not a change of climate is indicated. Certainly a change of climate should not be considered until regulation of personal hygiene and medical and surgical treatment have been given a thorough trial.

DO NOT INDULGE IN SELF-DIAGNOSIS OR SELF-TREATMENT. CONSULT  
YOUR DOCTOR

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**COURT DECISION ON PUBLIC HEALTH**

*Statute regulating tourist camps in a particular county held unconstitutional.*—(South Carolina Supreme Court; *Sansing v. Cherokee County Tourist Camp Board et al.*, *Spencer v. Same*, 10 S.E.2d 157; decided July 18, 1940.) The Cherokee County tourist camp board was created by a 1939 act of the general assembly of South Carolina. This act was a local or special act which related solely to the county of Cherokee and which contained provisions, among others, pertaining to the health of employees and sanitary facilities at tourist camps. In actions in which the plaintiffs sought to have the said board permanently enjoined from enforcing the provisions of the act, the act was assailed on the ground that it was in contravention of the State constitutional provision prohibiting the enactment of a special law where a general law could be made applicable. The view taken by

the supreme court was that the act did run counter to such constitutional prohibition and that the plaintiffs were entitled to a permanent injunction against the enforcement of the law. The court said that it had been demonstrated that a general law could be made applicable, citing a law which vested the State board of health with power to adopt and file regulations with reference to health and sanitary conditions in all tourist camps in the State and giving a reference to the regulations.

### DEATHS DURING WEEK ENDED OCTOBER 19, 1940

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Oct. 19, 1940	Correspond- ing week, 1939
<b>Data from 88 large cities of the United States:</b>		
Total deaths .....	7,632	7,846
Average for 3 prior years .....	8,026	
Total deaths, first 42 weeks of year .....	352,863	346,894
Deaths under 1 year of age .....	498	448
Average for 3 prior years .....	477	
Deaths under 1 year of age, first 42 weeks of year .....	21,064	21,002
<b>Data from industrial insurance companies:</b>		
Policies in force .....	64,784,337	66,567,106
Number of death claims .....	10,765	11,720
Death claims per 1,000 policies in force, annual rate .....	8.7	9.2
Death claims per 1,000 policies, first 42 weeks of year, annual rate .....	9.7	10.0



# PREVALENCE OF DISEASE

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*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

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## UNITED STATES

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### REPORTS FROM STATES FOR WEEK ENDED OCTOBER 26, 1940

#### Summary

As compared with the preceding week, slight increases were recorded during the current week for each of the 9 communicable diseases included in the weekly table, with the exception of poliomyelitis. The incidence of 4 of these diseases—influenza, measles, poliomyelitis, and whooping cough—was above the 5-year (1935–39) median expectancy, while the cumulative totals to date of only 2—influenza and poliomyelitis—were above the 5-year cumulative medians.

The number of cases of poliomyelitis declined from 514 for the preceding week to 434 for the current week, as compared with a 5-year median of 197 cases. Most of the States reported a decrease. Wisconsin reported the highest number of cases, 52, as compared with 29 for the preceding week.

For most of the weeks during the current year, the incidence of influenza has been above the 5-year median expectancy. Up to and including the current week (43 weeks), 174,921 cases have been reported, as compared with a 5-year cumulative median of 145,393 cases. The number of cases reported in 1940 to date was exceeded in only 1 year during the preceding 5 years, 1937, when 279,394 cases had been reported for the corresponding period. Texas, with 217 cases, South Carolina, with 198, and Arizona, with 112, reported the highest incidence for the current week.

Current reports show 11 cases of undulant fever, 4 cases of tularaemia, and 74 cases of endemic typhus fever, of which 38 were in Georgia, 10 in Alabama, 7 in Texas, and 5 each in Florida and Mississippi.

The Bureau of the Census reports 8,074 deaths in 88 major cities of the United States for the current week, as compared with 7,632 for the preceding week, and with a 3-year average of 8,024 for the corresponding week.

*Telegraphic morbidity reports from State health officers for the week ended October 26, 1940, and comparison with corresponding week of 1939 and 5-year median*

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, men- ingococcus		
	Week ended—		Med- ian, 1935- 39	Week ended—		Med- ian, 1935- 39	Week ended—		Med- ian, 1935- 39	Week ended—		Med- ian, 1935- 39
	Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939	
NEW ENG.												
Maine	1	2	2	1			71	2	14	0	0	0
New Hampshire	0	0	0				0	4	1	0	0	0
Vermont	0	0	0				6	20	14	0	0	0
Massachusetts	5	7	7				159	73	53	1	1	2
Rhode Island	0	1	0				0	20	4	0	0	0
Connecticut	1	0	2	1	1	1	3	8	8	0	0	0
MID. ATL.												
New York	16	18	29	13	18	17	157	89	89	0	1	6
New Jersey	8	9	10	1	3	5	74	7	23	0	1	1
Pennsylvania	6	34	25				369	38	46	2	4	4
E. NO. CEN.												
Ohio	9	34	64	15	18	9	11	17	24	0	1	3
Indiana	8	31	31	9	3	10	16	14	6	3	0	3
Illinois	12	32	35	5	11	8	135	13	17	2	3	3
Michigan <sup>1</sup>	6	3	20		5	2	168	67	24	1	2	2
Wisconsin	1	0	3	25	15	26	131	14	33	0	1	1
W. NO. CEN.												
Minnesota	1	3	6	2	3	2	0	12	12	1	1	1
Iowa	9	11	11	4	1	1	55	5	5	0	1	1
Missouri	13	14	21	1		35	7	4	9	0	0	0
North Dakota	4	0	3		4	4	0	7	3	1	1	0
South Dakota	1	5	2				2	28	3	0	0	0
Nebraska	5	1	2				8	2	2	0	0	0
Kansas	6	3	12	7	7	3	6	43	3	0	0	0
SO. ATL.												
Delaware	0	0	0				1	1	1	0	0	0
Maryland <sup>2</sup>	5	11	11	2	9	6	2	5	6	1	0	1
Dist. of Col.	0	1	7			1	2	2	1	0	0	1
Virginia	27	92	77	56	47		29	6	9	0	1	3
West Virginia <sup>2</sup>	4	28	39	2		11	1	2	2	2	0	2
North Carolina <sup>3</sup>	85	183	142	3	5	5	6	68	51	0	2	2
South Carolina <sup>4</sup>	27	31	29	198	221	221	2	1	6	2	1	1
Georgia <sup>4</sup>	28	61	57	19	32		3	2		0	1	0
Florida <sup>4</sup>	5	8	18		2	2	2	1	2	0	0	0
E. SO. CEN.												
Kentucky	20	22	41		1	9	51	3	35	2	2	2
Tennessee	16	29	58	19	5	22	16	2	2	2	1	3
Alabama <sup>4</sup>	31	44	44	24	53	36	3	2	2	1	1	2
Mississippi <sup>2</sup>	11	17	17							1	1	0
W. SO. CEN.												
Arkansas	12	24	24	35	24	19	0	4	4	0	1	0
Louisiana <sup>4</sup>	20	21	25	4	25	12	1	1	1	0	1	1
Oklahoma	24	12	25	18	70	33	6	2	2	0	0	1
Texas <sup>4</sup>	47	18	39	217	194	153	17	7	7	0	1	1
MOUNTAIN												
Montana	2	1	1	16	4	10	7	51	34	0	0	0
Idaho	0	0	0	5		2	0	9	9	0	0	0
Wyoming	1	3	1		2		4	35	2	1	0	0
Colorado	7	9	10	6	6		16	18	6	1	0	0
New Mexico	0	1	3		1	2	25	1	19	0	0	0
Arizona	5	5	8	112	58	29	14	2	2	0	1	0
Utah <sup>2</sup>	1	0	1	12	2	1	1	7	8	0	0	0
Nevada	0						0			0		
PACIFIC												
Washington	7	2	2				5	229	11	0	0	1
Oregon <sup>2</sup>	1	1	3	7	8	21	9	17	14	1	1	1
California	23	8	28	28	13	17	73	55	55	2	3	2
Total	521	840	1,018	856	861	756	1,674	1,020	1,317	27	35	60
43 weeks	12,218	17,800	20,947	174,921	156,891	145,393	237,570	354,791	354,791	1,374	1,660	4,732

See footnotes at end of table.

*Telegraphic morbidity reports from State health officers for the week ended October 26, 1940, and comparison with corresponding week of 1939 and 5-year median—Con.*

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median, 1935-39	Week ended—		Median, 1935-39	Week ended—		Median, 1935-39	Week ended—		Median, 1935-39
	Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939	
NEW ENG.												
Maine.....	0	0	0	14	9	10	0	0	0	1	1	2
New Hampshire.....	0	0	0	8	3	3	0	0	0	0	0	0
Vermont.....	0	3	0	12	11	5	0	0	0	1	0	1
Massachusetts.....	0	5	4	61	32	92	0	0	0	3	1	1
Rhode Island.....	0	0	0	3	3	10	0	0	0	1	0	1
Connecticut.....	2	0	2	7	30	34	0	0	0	5	3	2
MID. ATL.												
New York.....	12	42	14	163	139	188	0	0	0	4	18	14
New Jersey.....	3	5	4	66	59	59	0	0	0	1	5	4
Pennsylvania.....	5	16	4	111	187	192	0	0	0	7	15	20
E. NO. CEN.												
Ohio.....	33	8	7	156	169	251	0	0	0	5	6	13
Indiana.....	14	7	4	47	101	110	1	1	3	1	3	3
Illinois.....	38	8	12	178	209	213	13	1	2	18	15	18
Michigan.....	45	25	14	119	178	178	0	0	0	2	19	9
Wisconsin.....	52	3	1	104	98	137	6	0	0	0	1	1
W. NO. CEN.												
Minnesota.....	13	13	1	57	77	78	0	1	2	1	1	1
Iowa.....	48	17	3	58	68	68	1	6	4	2	2	3
Missouri.....	10	1	1	44	64	67	0	0	0	8	12	16
North Dakota.....	2	1	1	4	31	28	0	0	0	2	1	1
South Dakota.....	4	4	2	23	14	33	0	0	0	1	1	1
Nebraska.....	7	1	1	22	24	24	1	0	1	0	0	0
Kansas.....	20	1	1	59	67	88	0	0	0	1	3	3
SO. ATL.												
Delaware.....	0	0	0	3	7	5	0	0	0	3	3	3
Maryland.....	1	2	1	20	35	37	0	0	0	6	10	10
Dist. of Col.....	0	0	1	8	11	13	0	0	0	0	1	2
Virginia.....	12	2	2	49	67	65	0	0	0	10	6	14
West Virginia.....	31	1	1	34	86	90	0	0	0	5	3	10
North Carolina.....	1	1	2	128	123	92	0	0	0	3	3	9
South Carolina.....	0	1	1	39	27	14	0	0	0	11	13	8
Georgia.....	1	2	1	38	38	33	0	0	0	21	15	13
Florida.....	2	1	1	4	3	5	0	0	0	3	1	1
E. SO. CEN.												
Kentucky.....	13	5	5	56	73	77	0	0	0	23	5	12
Tennessee.....	4	0	1	81	71	66	1	0	0	7	5	13
Alabama.....	4	1	1	40	51	27	0	0	0	11	13	11
Mississippi.....	3	0	2	21	16	16	0	0	0	2	5	6
W. SO. CEN.												
Arkansas.....	3	2	2	7	16	16	0	0	0	7	13	6
Louisiana.....	3	1	1	10	12	14	0	0	0	7	9	12
Oklahoma.....	0	0	0	23	20	21	2	3	0	15	5	13
Texas.....	2	3	3	38	48	56	1	1	1	12	14	32
MOUNTAIN												
Montana.....	4	0	0	11	31	31	0	0	10	0	6	3
Idaho.....	4	3	0	13	3	18	1	1	2	0	1	3
Wyoming.....	9	0	0	11	5	9	0	0	0	1	0	0
Colorado.....	2	9	1	25	23	26	0	7	3	5	6	3
New Mexico.....	0	7	0	4	7	14	0	0	0	2	8	11
Arizona.....	0	1	0	3	0	3	0	0	0	0	1	2
Utah.....	7	7	1	8	10	12	0	0	0	1	0	0
Nevada.....	0			1			0			0		
PACIFIC												
Washington.....	13	1	3	27	41	34	0	2	2	6	3	3
Oregon.....	0	2	2	13	17	25	1	1	1	7	3	3
California.....	7	35	14	97	106	153	0	1	1	7	9	10
Total.....	434	247	197	2,129	2,511	2,882	28	25	76	239	268	331
43 weeks.....	8,383	6,245	6,245	131,380	131,066	183,639	2,089	8,910	8,662	8,399	11,271	12,670

See footnotes at end of table.

*Telegraphic morbidity reports from State health officers for the week ended October 26, 1940, and comparison with corresponding week of 1939 and 5-year median—Con.*

Division and State	Whooping cough		Division and State	Whooping cough	
	Week ended—			Week ended—	
	Oct. 26, 1940	Oct. 28, 1939		Oct. 26, 1940	Oct. 28, 1939
NEW ENG.			SO. ATL.—continued		
Maine.....	9	19	Georgia <sup>4</sup> .....	11	4
New Hampshire.....	13	0	Florida <sup>4</sup> .....	6	0
Vermont.....	14	24	E. SO. CEN.		
Massachusetts.....	142	96	Kentucky.....	88	58
Rhode Island.....	4	30	Tennessee.....	35	36
Connecticut.....	81	54	Alabama <sup>4</sup> .....	28	49
MID. ATL.			Mississippi <sup>1 4</sup> .....		
New York.....	405	272	W. SO. CEN.		
New Jersey.....	131	114	Arkansas.....	14	5
Pennsylvania.....	556	245	Louisiana <sup>4</sup> .....	7	34
E. NO. CEN.			Oklahoma.....	12	0
Ohio.....	254	169	Texas <sup>4</sup> .....	96	14
Indiana.....	19	31	MOUNTAIN		
Illinois.....	192	171	Montana.....	0	5
Michigan <sup>1</sup> .....	322	111	Idaho.....	8	2
Wisconsin.....	168	158	Wyoming.....	3	8
W. NO. CEN.			Colorado.....	27	13
Minnesota.....	52	64	New Mexico.....	19	8
Iowa.....	6	18	Arizona.....	11	10
Missouri.....	57	24	Utah <sup>1</sup> .....	27	39
North Dakota.....	27	4	Nevada.....	0	
South Dakota.....	2	0	PACIFIC		
Nebraska.....	9	1	Washington.....	56	12
Kansas.....	54	2	Oregon <sup>1</sup> .....	10	27
SO. ATL.			California.....	263	134
Delaware.....	24	4	Total.....		
Maryland <sup>1</sup> .....	81	56		3,492	2,237
Dist. of Col.....	7	12	43 weeks.....		
Virginia.....	35	24		134,993	150,098
West Virginia <sup>1</sup> .....	25	8			
North Carolina <sup>1 4</sup> .....	61	61			
South Carolina <sup>4</sup> .....	21	7			

<sup>1</sup> New York City only.

<sup>2</sup> Period ended earlier than Saturday.

<sup>3</sup> Rocky Mountain spotted fever, week ended October 26, 1940, 2 cases as follows: North Carolina, 1; Oregon, 1.

<sup>4</sup> Typhus fever, week ended October 26, 1940, 74 cases as follows: North Carolina, 1; South Carolina, 4; Georgia, 38; Florida, 5; Alabama, 10; Mississippi, 5; Louisiana, 4; Texas, 7.

## WEEKLY REPORTS FROM CITIES

City reports for week ended October 12, 1940

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet-fever cases	Small-pox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	162	69	23	224	401	594	3	329	54	881	-----
Current week <sup>1</sup>	50	50	11	320	299	439	0	271	31	1,052	-----
Maine:											
Portland	0		0	0	1	0	0	0	0	2	18
New Hampshire:											
Concord	0		0	0	1	1	0	0	0	0	4
Nashua	0		0	0	0	1	0	0	0	0	3
Vermont:											
Barre											
Burlington	0		0	0	0	1	0	0	0	1	9
Rutland	0		0	0	0	0	0	0	0	0	7
Massachusetts:											
Boston	0		0	13	11	6	0	10	0	47	180
Fall River	0		0	0	0	0	0	2	0	10	28
Springfield	0		0	0	0	3	0	2	0	4	31
Worcester	1		0	32	1	0	0	0	0	1	38
Rhode Island:											
Pawtucket	0		0	0	0	0	0	0	0	0	18
Providence	0		0	0	0	1	0	2	0	1	50
Connecticut:											
Bridgeport	0		0	0	2	1	0	0	0	5	41
Hartford	0		0	0	1	1	0	1	0	1	33
New Haven	0	1	0	0	1	0	0	0	0	26	26
New York:											
Buffalo	0		0	1	9	9	0	2	0	11	100
New York	10	7	1	66	52	43	0	57	9	119	1,371
Rochester	0		0	3	3	1	0	1	0	8	64
Syracuse	0		0	0	0	0	0	0	0	1	43
New Jersey:											
Camden	0		0	4	0	1	0	1	0	0	25
Newark	0		0	17	1	12	0	12	0	22	80
Trenton	0		0	0	1	3	0	1	0	1	46
Pennsylvania:											
Philadelphia	3	2	1	58	8	23	0	17	3	109	394
Pittsburgh	0	1	1	0	6	10	0	8	0	24	148
Reading	0		0	0	1	0	0	2	0	35	34
Scranton	0			0		0	0		0	0	-----
Ohio:											
Cincinnati	1	1	0	1	5	6	0	4	1	6	126
Cleveland	0	7	0	0	9	8	0	2	1	73	193
Columbus	0	1	1	0	1	2	0	2	0	24	72
Toledo	0	1	0	2	1	1	0	8	0	9	67
Indiana:											
Anderson	0		0	0	1	0	0	0	0	0	15
Fort Wayne	0		0	0	2	1	0	0	0	1	24
Indianapolis	2		1	3	8	2	0	6	0	8	99
Muncie	0		0	0	2	1	0	0	0	0	9
South Bend	0		0	0	4	0	0	0	0	0	18
Terre Haute	1		0	0	2	0	0	0	2	0	29
Illinois:											
Alton	0		0	0	0	1	0	0	0	0	9
Chicago	6	2	1	37	25	68	0	40	1	78	672
Elgin	0		0	0	0	0	0	0	0	5	8
Moline	0		0	0	1	1	0	0	0	0	10
Springfield	0		0	0	2	1	0	0	0	2	31
Michigan:											
Detroit	1	2	0	35	9	51	0	8	0	125	257
Flint	0		0	0	1	1	0	0	0	11	23
Grand Rapids	0		0	0	1	5	0	0	1	31	34
Wisconsin:											
Kenosha	0		0	1	0	0	0	0	0	0	8
Madison	0		0	2	0	3	0	0	0	3	10
Milwaukee	1		0	12	5	23	0	0	0	15	102
Racine	0		0	0	0	3	0	1	0	0	10
Superior	0		0	0	0	5	0	0	0	0	12
Minnesota:											
Duluth	0		0	1	0	0	0	1	0	0	21
Minneapolis	0		0	1	1	21	0	1	1	13	87
St. Paul	0		0	0	9	9	0	0	0	11	73

<sup>1</sup> Figures for Barre and Boise estimated; reports not received.



## City reports for week ended October 12, 1940—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping-cough cases	Deaths, all causes
		Cases	Deaths								
<b>Iowa:</b>											
Cedar Rapids	0			0		5	0		0	0	
Davenport	1			0		3	0		0	0	
Des Moines	0		0	0	0	5	0	0	0	0	27
Sioux City	0			0		0	0		0	3	
Waterloo	0			0		3	0		0	1	
<b>Missouri:</b>											
Kansas City	0		0	0	4	2	0	3	1	14	75
St. Joseph	0		0	0	1	0	0	0	0	0	26
St. Louis	1		0	1	7	7	0	1	0	8	173
<b>North Dakota:</b>											
Fargo	0		0	0	0	3	0	0	0	1	7
Grand Forks	0			0		0	0		0	0	
Minot	0			0		0	0		0	0	
<b>South Dakota:</b>											
Aberdeen	0			0		0	0		0	0	
Sioux Falls	0		0	0	0	7	0	0	0	0	8
<b>Nebraska:</b>											
Omaha	0		0	1	1	1	0	0	1	0	53
<b>Kansas:</b>											
Lawrence	0		0	0	0	0	0	0	0	0	4
Topeka	0			0		5	0		0	0	
Wichita	0		0	0	1	1	0	0	0	3	24
<b>Delaware:</b>											
Wilmington	0		0	1	3	0	0	0	0	5	26
<b>Maryland:</b>											
Baltimore	0	1	0	4	8	13	0	13	2	38	194
Cumberland	0		0	0	1	0	0	0	0	1	9
Frederick	0		0	0	1	0	0	0	0	0	8
<b>Dist. of Col:</b>											
Washington	2		0	2	7	5	0	11	1	4	136
<b>Virginia:</b>											
Lynchburg	0		0	0	0	0	0	0	0	4	9
Norfolk	1		0	1	2	0	0	1	0	0	27
Richmond	0		1	0	1	0	0	2	0	0	43
Roanoke	1		0	5	1	4	0	1	0	0	11
<b>West Virginia:</b>											
Charleston	0		0	0	2	1	0	0	0	2	18
Huntington	0			0		0	0		0	0	
Wheeling	0		0	0	2	0	0	0	0	0	11
<b>North Carolina:</b>											
Gastonia	3			0		0	0		0	0	
Raleigh	1		0	0	0	0	0	0	0	0	5
Wilmington	1		0	0	2	1	0	0	1	0	14
Winston-Salem	1	1	0	0	0	8	0	1	0	11	11
<b>South Carolina:</b>											
Charleston	0	2	0	0	1	0	0	0	0	0	14
Florence	0		0	0	1	0	0	0	0	0	10
Greenville	0		0	1	0	0	0	0	0	0	6
<b>Georgia:</b>											
Atlanta	1	8	0	1	6	9	0	3	0	1	88
Brunswick	0		0	0	1	0	0	0	0	0	2
Savannah	0	3	0	1	1	0	0	1	0	0	32
<b>Florida:</b>											
Miami	0		0	0	0	1	0	1	0	1	33
Tampa	1		0	0	2	0	0	0	0	0	26
<b>Kentucky:</b>											
Ashland	0		0	0	1	0	0	0	0	0	11
Covington	0		0	1	2	6	0	1	0	0	15
Lexington	0		0	3	0	0	0	0	0	1	14
Louisville	0		0	1	2	8	0	2	1	7	79
<b>Tennessee:</b>											
Knoxville	1		0	0	0	2	0	0	1	0	24
Memphis	0		0	1	2	6	0	2	1	4	82
Nashville	0		0	0	1	3	0	2	1	7	48
<b>Alabama:</b>											
Birmingham	2	2	0	2	2	3	0	1	2	1	69
Mobile	1	1	0	0	1	0	0	1	0	0	23
Montgomery	0			0		1	0		0	2	
<b>Arkansas:</b>											
Fort Smith	0			0		0	0		0	1	
Little Rock	0		0	1	2	0	0	1	0	2	

## City reports for week ended October 12, 1940—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping-cough cases	Deaths, all causes
		Cases	Deaths								
Louisiana:											
Lake Charles.....	0	-----	0	0	0	0	0	0	0	0	4
New Orleans.....	0	-----	1	3	13	2	0	6	0	1	128
Shreveport.....	2	-----	0	0	3	2	0	1	0	0	27
Oklahoma:											
Oklahoma City.....	0	-----	0	0	1	5	0	4	0	0	36
Tulsa.....	1	-----	0	0	0	2	0	0	1	2	13
Texas:											
Dallas.....	2	-----	0	1	1	6	0	2	0	2	55
Fort Worth.....	1	-----	0	3	3	4	0	1	5	1	40
Galveston.....	0	-----	0	0	1	0	0	1	0	0	17
Houston.....	0	-----	1	0	6	2	0	4	2	0	85
San Antonio.....	1	-----	0	0	6	0	0	8	0	2	49
Montana:											
Billings.....	0	-----	0	0	0	0	0	0	0	0	7
Great Falls.....	0	-----	0	0	2	0	0	0	0	0	11
Helena.....	0	-----	0	0	0	0	0	0	0	0	4
Missoula.....	0	-----	0	0	0	1	0	0	0	0	5
Idaho:											
Boise.....		-----									
Colorado:											
Denver.....	2	-----	0	2	7	1	0	1	0	9	88
Pueblo.....	0	-----	1	0	1	1	0	0	0	0	5
New Mexico:											
Albuquerque.....	0	-----	0	0	3	0	0	1	0	0	8
Utah:											
Salt Lake City.....	0	-----	0	0	0	1	0	0	0	2	29
Washington:											
Seattle.....	0	-----	0	1	3	2	0	3	0	3	112
Spokane.....	0	-----	0	0	1	5	0	0	0	0	41
Tacoma.....	0	-----	0	0	0	0	0	0	0	0	31
Oregon:											
Portland.....	4	-----	0	1	5	0	0	2	1	2	82
Salem.....	0	-----		0		0	0		0	0	
California:											
Los Angeles.....	4	8	1	3	3	13	0	14	0	66	334
Sacramento.....	0	-----	0	1	4	2	0	1	0	4	29
San Francisco.....	1	-----	0	4	4	3	0	4	0	32	154

## City reports for week ended October 12, 1940—Continued

State and city	Meningitis, meningococcus		Polio- mye- litis cases	State and city	Meningitis, meningococcus		Polio- mye- litis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Missouri:			
Boston.....	0	1	0	Kansas City.....	0	0	6
Springfield.....	0	0	1	St. Joseph.....	0	0	3
Rhode Island:				North Dakota:			
Providence.....	0	0	1	Minot.....	0	0	1
New York:				Kansas:			
New York.....	3	1	4	Topeka.....	0	0	4
New Jersey:				Virginia:			
Newark.....	0	0	1	Lynchburg.....	0	0	1
Pennsylvania:				Richmond.....	0	0	1
Philadelphia.....	0	0	7	Roanoke.....	0	0	1
Pittsburgh.....	0	0	1	West Virginia:			
Ohio:				Charleston.....	0	0	1
Cincinnati.....	0	0	5	Kentucky:			
Cleveland.....	0	0	3	Louisville.....	0	1	0
Columbus.....	0	0	4	Alabama:			
Toledo.....	0	0	1	Birmingham.....	1	0	1
Indiana:				Louisiana:			
Fort Wayne.....	0	0	1	New Orleans.....	0	0	1
Indianapolis.....	0	0	3	Texas:			
Muncie.....	0	0	2	Dallas.....	0	0	1
Illinois:				Fort Worth.....	0	0	1
Chicago.....	0	0	11	Houston.....	1	0	0
Michigan:				Montana:			
Grand Rapids.....	0	0	2	Missoula.....	0	0	2
Wisconsin:				Utah:			
Madison.....	0	0	3	Salt Lake City.....	0	0	1
Milwaukee.....	0	0	2	Washington:			
Minnesota:				Seattle.....	0	0	2
Duluth.....	0	0	5	Spokane.....	0	0	1
Minneapolis.....	0	0	3	California:			
St. Paul.....	0	0	1	Los Angeles.....	0	0	2
Iowa:				Sacramento.....	0	0	3
Davenport.....	0	0	1	San Francisco.....	0	0	1
Des Moines.....	0	0	3				
Sioux City.....	0	0	1				
Waterloo.....	0	0	2				

*Encephalitis, epidemic or lethargic.*—Cases: New York, 1; Pittsburgh, 1; Birmingham, 1; Sacramento, 1.  
*Pellagra.*—Cases: Philadelphia, 1; Toledo, 1; Wilmington, N. C., 1; Charleston, S. C., 1; Savannah, 1;  
 Montgomery, 1; New Orleans, 1; Los Angeles, 1.

*Typhus fever.*—Cases: New York, 2; Charleston, S. C., 2; Atlanta, 4; Savannah, 3; Birmingham, 1;  
 Mobile, 1; New Orleans, 2; Houston, 1. Deaths: Savannah, 1.

## FOREIGN REPORTS

### CANADA

*Provinces—Communicable diseases—Weeks ended September 14 and 21, 1940.*—During the weeks ended September 14 and 21, 1940, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

#### *Week ended September 14, 1940*

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis		1			1	1		1		4
Chickenpox		6	1	14	43	8	10	8	19	109
Diphtheria		1	1	8	3	5		4		22
Dysentery					1					1
Influenza		2			51	1			20	74
Measles	3		2	9	32	21	2	7	9	85
Mumps					33	13	3		7	56
Pneumonia		1			11	1			3	16
Poliomyelitis		1			10	2				13
Scarlet fever			5	41	50	3	4	11	4	118
Trachoma									2	2
Tuberculosis	2	22	12	36	45	3		3		123
Typhoid and paratyphoid fever		2	1	3	10	1		3	1	21
Whooping cough		1	18	94	74	27	14	11	25	264

#### *Week ended September 21, 1940*

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis				1	3					4
Chickenpox		3	1	10	41	10	5	15	17	102
Diphtheria		1		23	1	7	3			35
Dysentery				4						4
Influenza		18			20	1			24	63
Lethargic encephalitis						1				2
Measles				50	70	9	14	24	50	217
Mumps				11	44	4	4	3	4	70
Pneumonia		17			2	1			5	25
Poliomyelitis				4	5	1				10
Scarlet fever		1		80	69	14	12	5		187
Trachoma									6	2
Tuberculosis	3	7	6	65	61	2		1		145
Typhoid and paratyphoid fever			4	24	7					35
Whooping cough		60		233	88	17	11	1	8	418

### CUBA

*Habana—Communicable diseases—4 weeks ended September 21, 1940.*—During the 4 weeks ended September 21, 1940, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria	11	2	Tuberculosis		2
Malaria	1		Typhoid fever	25	7
Scarlet fever	1				

*Provinces—Notifiable diseases—4 weeks ended September 14, 1940.*—During the 4 weeks ended September 14, 1940, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer.....	1	1	3	2	-----	13	20
Diphtheria.....	3	12	4	4	-----	5	28
Leprosy.....	-----	1	-----	-----	-----	2	3
Malaria.....	13	6	-----	12	1	38	70
Measles.....	-----	-----	-----	-----	-----	10	10
Scarlet fever.....	-----	4	-----	1	-----	-----	5
Tuberculosis.....	18	32	33	29	16	34	162
Typhoid fever.....	16	61	15	45	23	37	197
Yaws.....	1	-----	-----	-----	-----	-----	1

#### VIRGIN ISLANDS OF THE UNITED STATES

*Notifiable diseases—July–September 1940.*—During the months of July, August, and September 1940, cases of certain notifiable diseases were reported in the Virgin Islands of the United States as follows:

Disease	July	August	September	Disease	July	August	September
Chickenpox.....	-----	1	7	Malaria.....	1	-----	5
Filariasis.....	2	8	4	Pneumonia (lobar).....	-----	1	-----
German measles.....	-----	-----	1	Schistosomiasis.....	-----	1	-----
Gonorrhea.....	9	13	10	Syphilis.....	14	23	8
Hookworm disease.....	11	7	3	Tetanus.....	-----	-----	1
Influenza.....	1,406	6	-----	Tuberculosis.....	-----	2	1

#### REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—A cumulative table giving current information regarding the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS of October 25, 1940, pages 1973-1976. A similar table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

##### Plague

*Peru—Libertad Department—Trujillo.*—During the month of August 1940, 1 case of plague was reported in the city of Trujillo, Libertad Department, Peru.

##### Yellow Fever

*Ivory Coast—Bribomo Circle—Daloa.*—On October 21, 1940, 1 death from suspected yellow fever was reported in Daloa, Bribomo Circle, Ivory Coast.